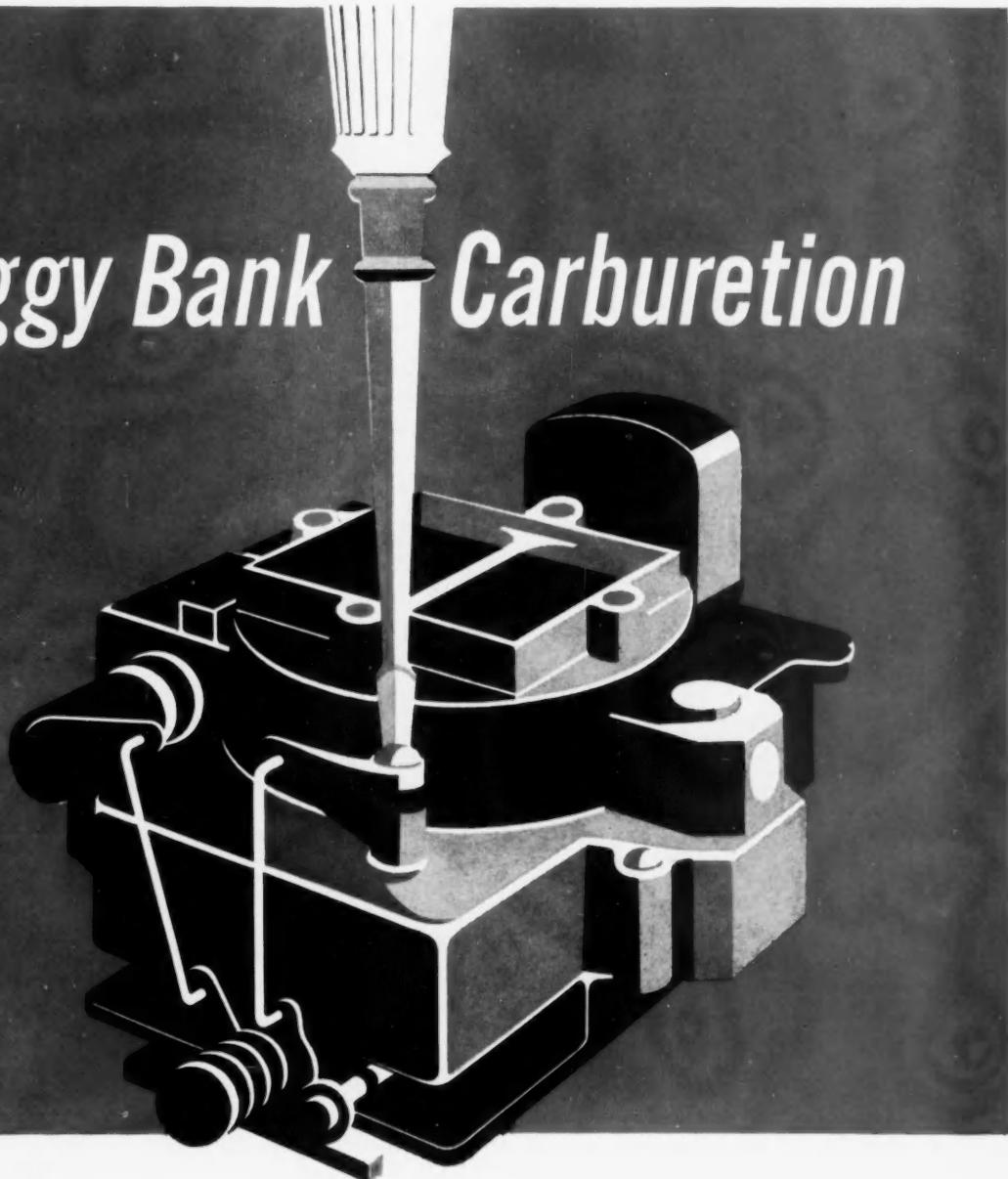


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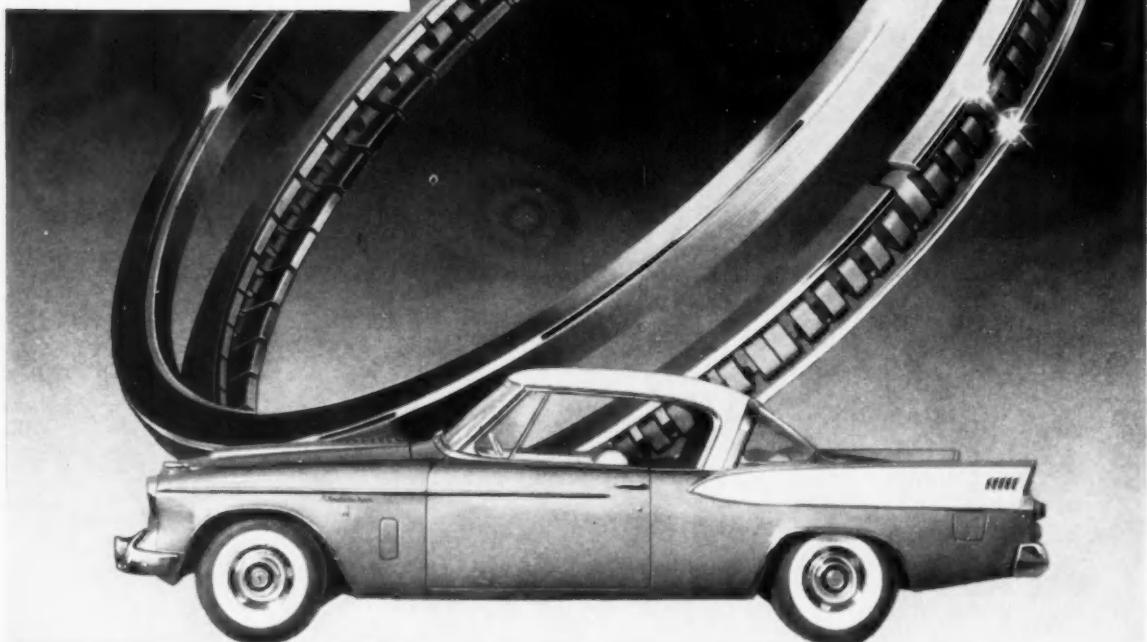
September 1958

Piggy Bank - Carburetion



Also in this Issue: Automotive Service League's Shop of the Month—p. 41
Fuel Economy Thru Carburetor Service—p. 48; Servicing the Hillman Minx—p. 70
New Buick Makes Bow—p. 44; Mechanical Highlights of New Chrysler Line—p. 59

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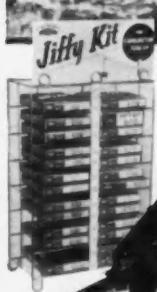
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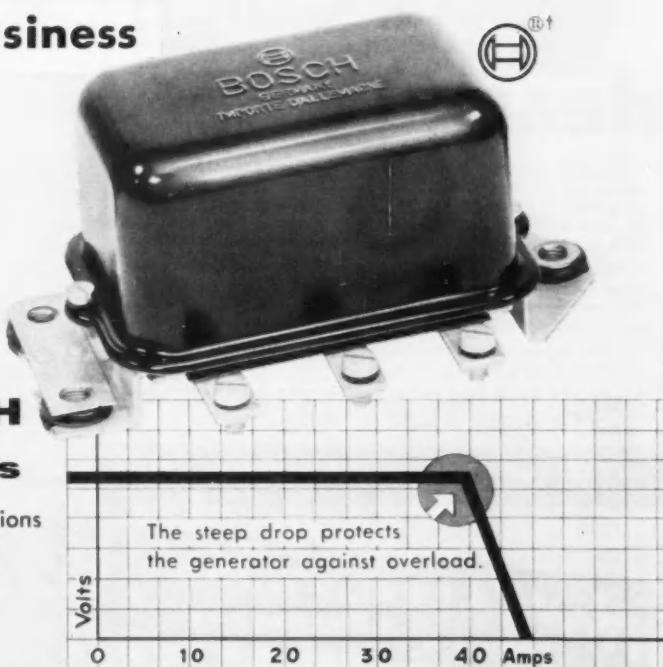
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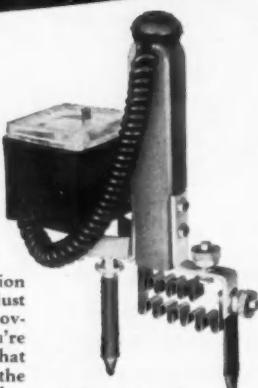
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SEPTEMBER, 1958

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MOTOR AGE MEMO

What's With This-Too Little and Too Late

HOW often have we said to ourselves, if we could have gotten into that a little early, we'd have made a pile of money? Too little sales and merchandising effort, too little stocking of saleable goods—too late to cash in on the winter ahead.

As you read this, there are footballs in the air. As soon as the falling leaves are burned or composted, there will be snow and car trouble ahead.

It won't be but a few short weeks when the anti-freeze flood will be at hand. Remember that sudden blast of cold that rears up and seems to telegraph the fact that hundreds of last minute car owners will be demanding radiator protection? That's the way this business goes. Everybody needs help at the same time.

An available stock of anti-freeze, skid chains, batteries, and snow tires is something you should be thinking about at this time. Give yourself and your men a volume-goal to shoot at. This stuff is bought in the jaws of an emergency. Your aim should be to sell a lot of it in advance of such on-coming winter crises.

Also, prepare yourself to sell fall and winter tune-up, radiator service and heater service.

Christmas is approximately ninety days away, as you read this. Many service operators have learned to cash in on Christmas gift giving by the use of gift certificates. Plan now an inexpensive mailing campaign

offering merchandise and service as Christmas gifts. Surprise yourself by learning how much profit there is waiting to be earned by selling Christmas "packages" made up of the services you sell.

We know that right now this is pretty sweaty weather we're having—but it won't be long before you'll be bringing in the brass monkeys.

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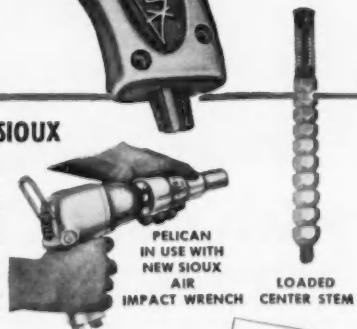


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Pelican NUT ACCUMULATOR

Action of the impact wrench removes nuts and spins them up into the Pelican on a center stem. The stem will hold ten $\frac{3}{4}$ " or 13/16" hex nuts, either 7/16" or $\frac{1}{2}$ " thread. Reverse action spins the nuts back on. Stems can be removed with their load of nuts and empty stems installed in their place. Or, stems can be pre-loaded and placed in Pelican for assembly operations.

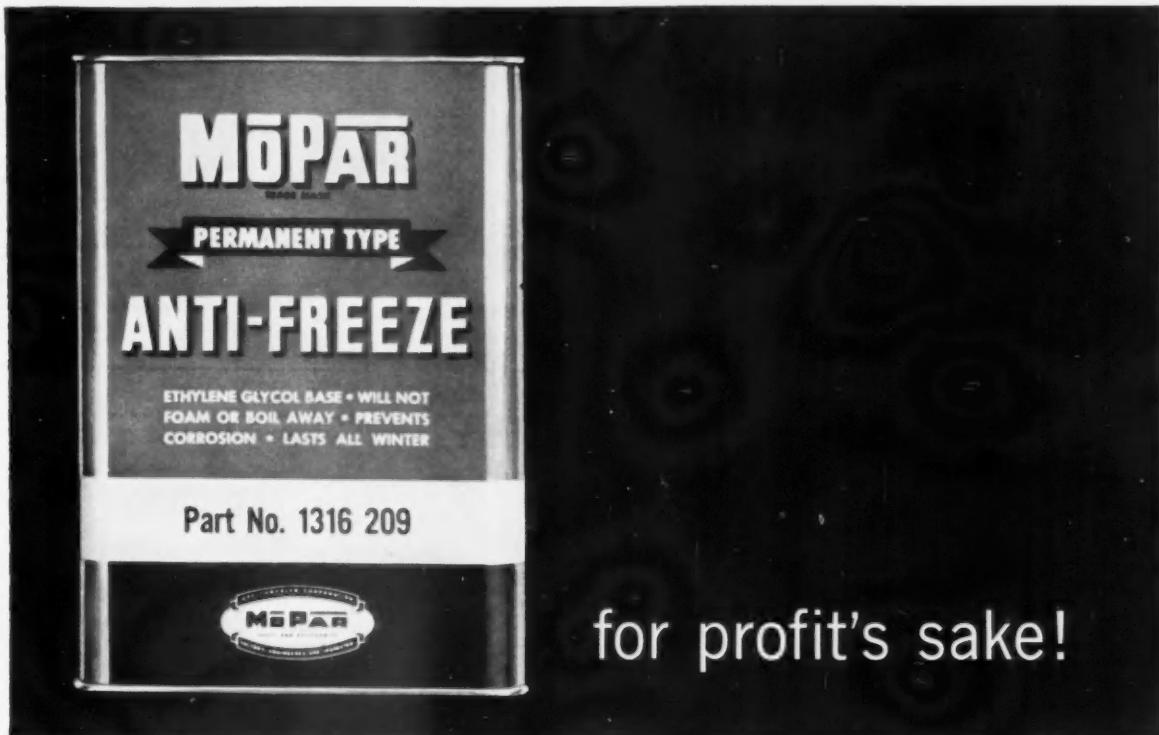
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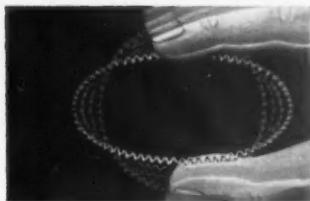
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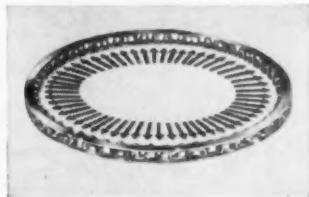
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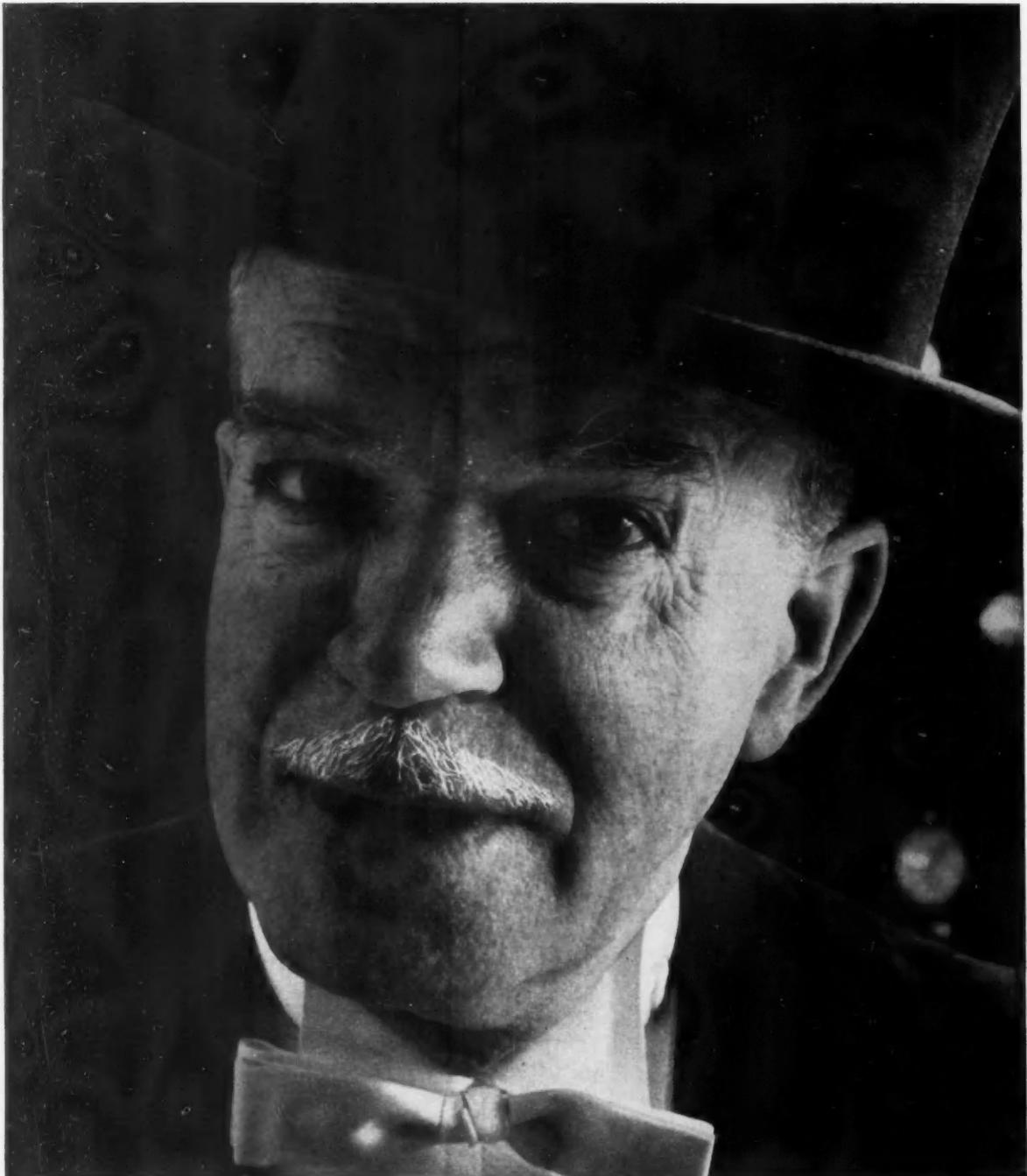
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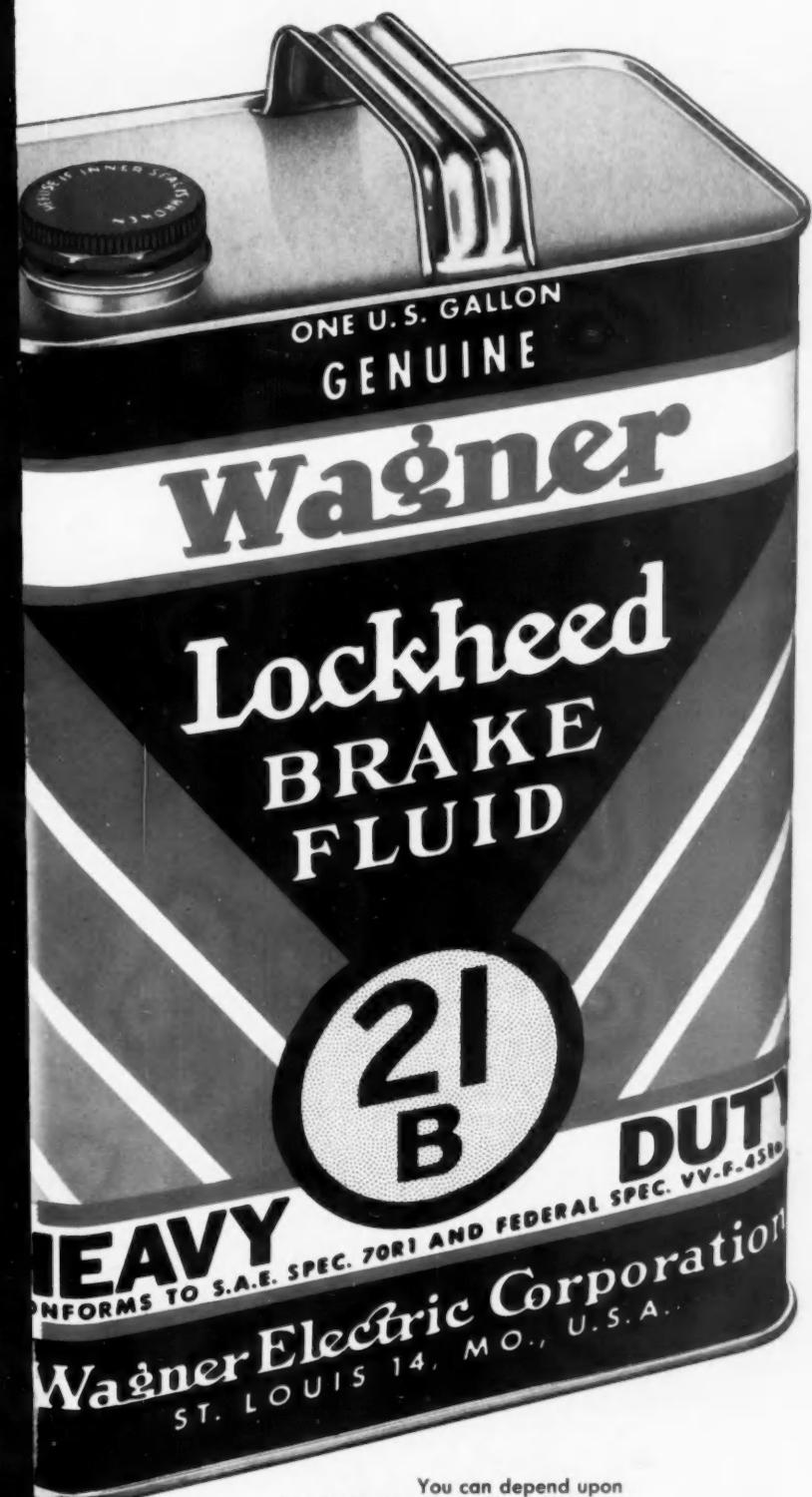
Installation is simple, the profit is right and your

customers are happy because they will get the improved performance which only a new Stromberg can give.

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WAGNER QUALITY because Wagner
Products are used as original
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cars, trucks, trailers and buses.

*there definitely is a difference in quality
of brake fluid...all brands are not alike!*

Wagner Lockheed BRAKE FLUID

has the correct chemical balance
for best results under all operating conditions

One of the major differences in brands of brake fluid is the all-important essential of correct chemical balance.

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5, 30, and 54 gallon containers).

Wagner Electric Corporation
6400 PLYMOUTH AVENUE, ST. LOUIS 14, MO., U.S.A.
(Branches in principal cities in U.S. and in Canada)

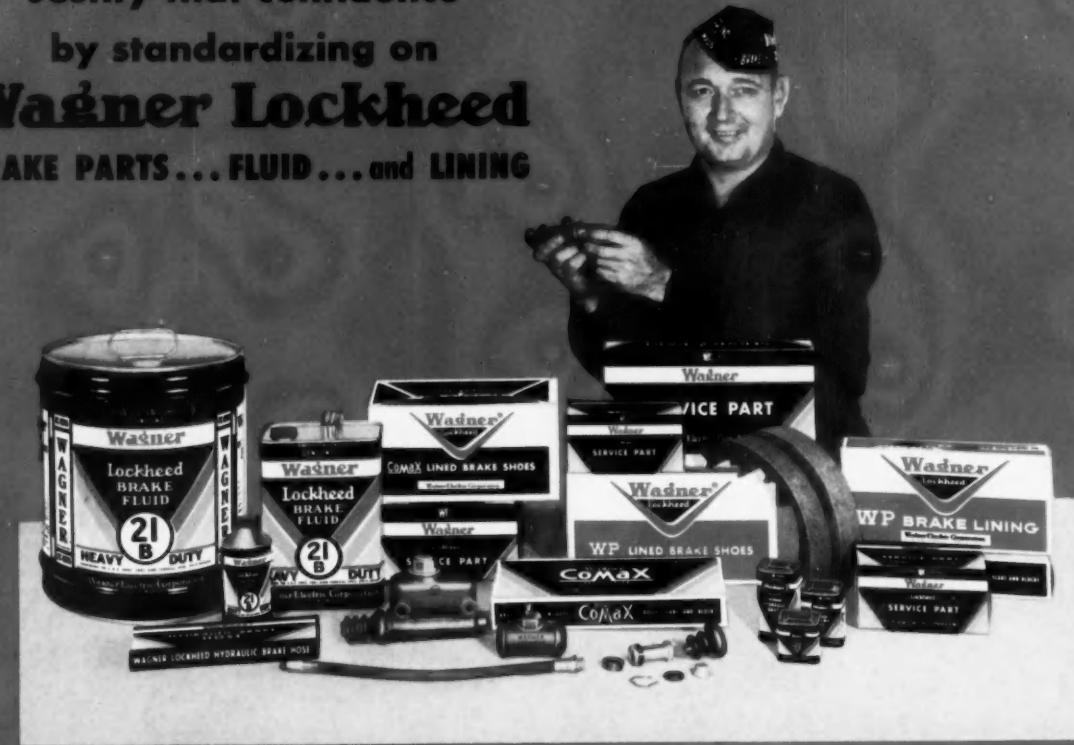
Wagner Lockheed

the best known name in brake service

**DO YOU
HAVE THE
MISTAKEN
IDEA...**
**that all brands
of brake fluid
are alike
in quality?**

LIFT THIS PAGE
and get
INSIDE INFORMATION

Your customers place
their safety in your hands...
Justify that confidence
by standardizing on
Wagner Lockheed
BRAKE PARTS... FLUID... and LINING



**the Wagner Lockheed line is complete
... and every product in this top-quality line is engineered
to perform safely at high temperatures of modern braking**

When you supply your customers with Wagner Lockheed Hydraulic Brake Parts you are furnishing the *same* quality products as the vehicle manufacturer.

WAGNER LOCKHEED BRAKE PARTS—cylinders, pistons, springs, washers, cups, boots, hose, etc.—marketed in the automotive service industry as repair and replacement parts, are manufactured to the same specifications, by the same machinery, as parts used in complete assemblies for original equipment.

Of equal importance in this great line is **WAGNER LOCKHEED BRAKE FLUID**—which is chemically balanced to function perfectly under all driving conditions—and **WAGNER LOCKHEED BRAKE LINING**, **BLOCKS**, and **EXCHANGE SHOES**... all unsurpassed for quick, safe, smooth stops.

For details, see Bulletin AU-451.

Wagner Electric Corporation
6400 PLYMOUTH AVENUE, ST. LOUIS 14, MO., U.S.A.
(Branches in principal cities in U.S. and in Canada)

GET THIS 4-WAY PAYOFF

... with the new DeVilbiss Remote Cup



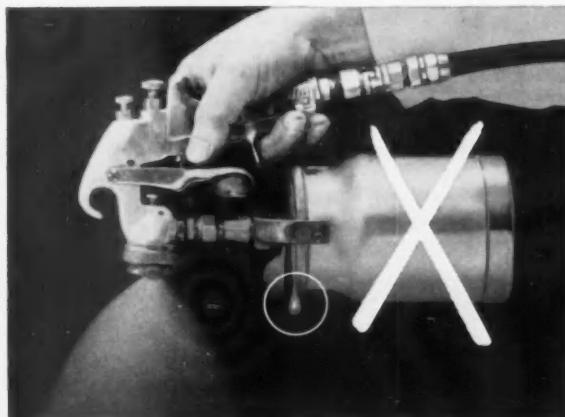
1 EASY TO MANEUVER!

New DeVilbiss Remote Cup Method transfers paint container to your idle hand. Reduces dead weight in your outstretched gun hand 60%. Permits free and easy movement. Reduces the fatigue that prompts an operator to rush a job and sacrifice quality.



2 SPRAYS AT ANY ANGLE!

Remote-Cup flexibility lets you hold the gun at proper angle to spray rocker panels, fender skirts, stone aprons, fins, and reverse curves—easily, evenly, efficiently. You can twist, turn, even invert the gun to spray *any* surface properly.



3 ELIMINATES DRIP HAZARD!

Unlike siphon-feed cups, the Remote-Cup Method permits you to keep the gun pointed at right angles to the job without the risk of dripping paint from the cup vent hole. Paint container is away from the freshly painted surface, remains vertical at all times.



4 GIVES BETTER SPRAY CONTROL!

Remote Cup's exclusive five-way spray control balances fluid- and air-flow to assure properly atomized wet coat for excellent flowout; to avoid "orange peel;" and reduce spray fog. Handles all materials—lacquers, enamels, acrylics, primers, surfacers.

SEE IT AT YOUR JOBBER'S...
GET THE REAL FEEL OF THIS NEW,
IMPROVED METHOD OF CAR PAINTING

FOR BETTER SERVICE, BUY
DEVILBISS

THE DEVILBISS COMPANY, Toledo 1, Ohio • Barrie, Ontario • London, England • Offices in Principal Cities

TRADE NOW—be ready for

Now--a \$10 trade-in allowance spark plug cleaner and tester during

★ **FASTER, MORE ACCURATE TESTING**

★ **MORE EFFICIENT CLEANING**

★ **DOES YOUR SELLING FOR YOU**



"SERIES 800" UNIT FEATURES

1. Compressed air inlet— $\frac{1}{2}$ " pipe thread—male
2. Double-action valve for cleaning and dusting
3. Tester button switch
4. Synthetic rubber cleaner adapter and clamp
5. New tester sparking-indicator dial—simplifies testing
6. Rubber covered high tension cable and clip
7. Tester compression chamber and spark plug adapter
8. Needle valve for fine control of tester air pressure
9. Recessed mirror and compression chamber window
10. Complete set rubber cleaner adapters
11. Complete set steel tester adapters
12. Gray, baked enamel, hammered-tone finish

"fall change-over" business!

on the Champion "Series 800" September and October only!

Your Champion supplier will give you a \$10 allowance for any old spark plug service unit—regardless of make, model or condition. Trade now!

It's your best chance ever to put this modern spark plug merchandiser to work for you!

Your Champion supplier will give you a \$10 trade-in allowance on the purchase of a new Champion "Series 800" spark plug cleaner and tester during September and October. Regardless of make, model or condition, your old service unit is worth \$10 in trade from now through October 31, 1958.

We're making this special offer because we want you to have the most modern and efficient service unit available—to help you do an even better spark plug servicing job in less time. And, naturally, when you use one of these new units you sell more Champion Spark Plugs. (The fall season is an excellent time to sell new sets of Champions for easy starting during cold winter months.)

The floor model is \$67.50, less a \$10 trade. The bench model is \$64.50, less \$10 trade, during September and October only.

One of the outstanding features of this "Series 800" unit is the "built-in salesman"—a new type of sparking-indicator gauge that shows directly if an old plug should be replaced. It eliminates the bother

(and possible inaccuracy) of checking the old plug against a new one. This new gauge measures a plug against a fixed standard. Your customer can *see for himself* if new Champions are needed. You don't have to sell the new Champions—you just install them.

There are real profits to be made from spark plug sales and service. And this advanced Champion cleaner and tester—now available on this special offer—can help you make more money—in less time and with less effort. *Get one from your Champion supplier now!*



NEW DOUBLE-FILTER CLEANER BAG
—separates dirt and dust from cleaning abrasive—faster, more dust-free cleaning action—simple to service.



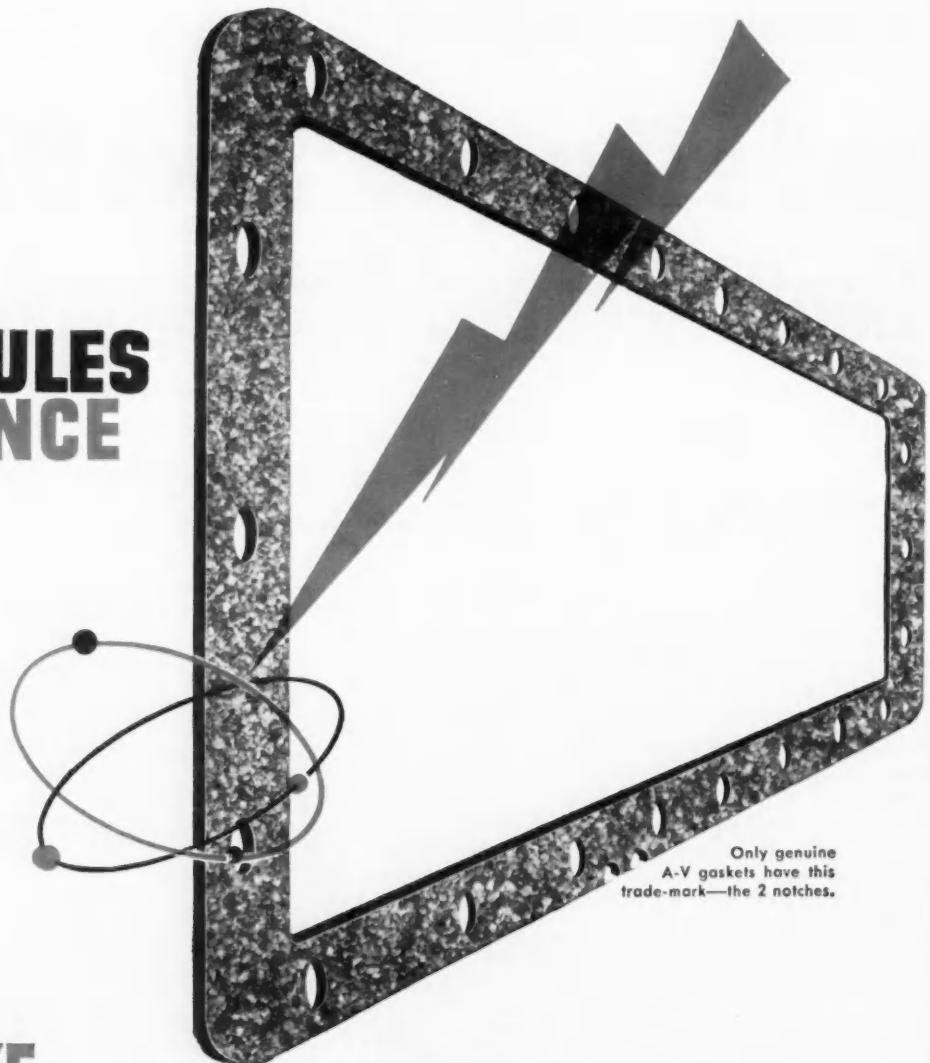
NEW SPARKING-INDICATOR TESTER DIAL — a new, simpler method of testing spark plugs—single plug test saves time — sells new Champions *fast*.



HEAVY-DUTY WATER TRAP — now standard equipment — keeps abrasive compound free from air-line moisture — protects air lines, etc. from rust.

CHAMPION SPARK PLUG COMPANY • TOLEDO 1, OHIO

MOLECULES DANCE



Only genuine
A-V gaskets have this
trade-mark—the 2 notches.

TO MAKE A-V CORK GASKETS BETTER

High-frequency electronic baking—the exclusive Armstrong-Victor process for curing cork—makes A-V gaskets better.

This deep, penetrating current generates heat from inside the cork mix. It produces instant, lively action in each cork molecule. In minutes, the composition is completely fused and cured. The finished cork structure is made uniformly dense and strong. It retains natural resilience . . . is never scorched

or undercured, which often happens when cork is steam-cured.

THAT'S WHY A-V cork gaskets are stronger, more flexible and resistant to breakage . . . why they make tighter, longer-lasting seals. A-V precision die-cutting and sharp, clean punching, are more reasons why A-V cork gaskets are universal favorites in first-class shops. Your Victor Jobber carries complete stocks—in sets or individual parts.

Victor Mfg. & Gasket Co., P.O. Box 1333, Chicago 90, Ill. Canadian Plant: St. Thomas, Ont.

Armstrong-VICTOR
CORK GASKETS

The 100% Coverage Line—for Cars, Trucks, Tractors, Stationary Engines

NEW DELCO SUPER 99 BRAKE FLUID—heavy-duty protection throughout 400° range at economy prices!

COLD!

HOT!

Gives
COLD
WEATHER
SAFETY
under
operating
conditions*
as low as
-60°F.

Gives
HOT
WEATHER
SAFETY
under
operating
conditions*
in excess of
350°F.

For extra cold weather safety, it's new Delco Super 99 Brake Fluid! Flows freely at minus 60° F. AND exceeds the minimum boiling point of SAE-70R1 specification by 50 degrees plus. Delco Super 99 is chemically and physically stable, compatible with all rubber or metal brake system parts and with other quality brake fluids.

Give your customers 400° range heavy-duty protection with Delco Super 99. Order through the United Motors System, or through Chevrolet.

*In wheel cylinders under normal static pressures.



In a wide variety of sizes including this new 12-oz. can.

For safety's sake sell the best . . .
sell Delco Brake Fluids



Chilton's MOTOR AGE, SEPTEMBER, 1958



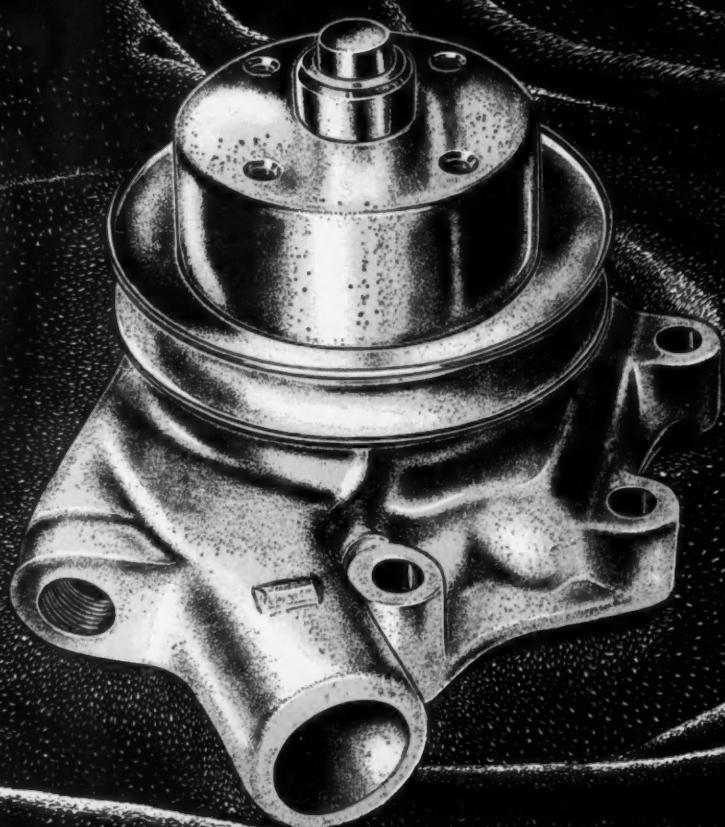
Moraine Products

Division of General Motors, Dayton, Ohio

Circle 375 On Inquiry Card, page 65

25

Presenting. . .

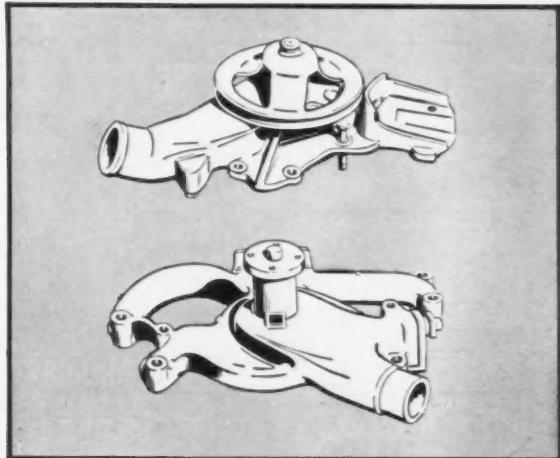


A Complete Line of **WATER PUMPS**

**The finest ever developed for...
LONG, TROUBLE-FREE SERVICE**

Precision-Engineered — Performance-Tested

You can install a Permite Water Pump with complete assurance of satisfaction—*every time!* Each water pump is specifically designed for the particular car, truck, bus or tractor application for which it is used. Recommend Permite to your customers as the *quality pumps preferred* by service experts in the trade. Like all other parts in the complete line, Permite Water Pumps are built to the highest engineering standards, mechanically tested and 100% vacuum tested to assure superior performance throughout a long, trouble-free life.



*Permite Water Pumps — A Part of Today's
Bigger and Better Line of Permite Preferred
Parts. For the complete line, call your jobber.*

ALUMINUM INDUSTRIES, INC. • Cincinnati 11, Ohio



by vehicle manufacturers / car and truck dealers / garage and service men / fleet operators

..... HERE'S AN EXCLUSIVE!

ONLY PEAK® ANTI-FREEZE OFFERS A PROGRAM LIKE THIS!

ROUND-THE-CLOCK ADVERTISING for six
weekends in September and October on

MONITOR

"the NBC Radio Network's weekend-listening service"

STARRING THESE FAVORITES



George Gobel



Fibber McGee and Molly



Bob and Ray



Paul Winchell and
Jerry Mahoney



of Duffy's Tavern

Backed by reminder ads Monday thru Friday
for 8 weeks in leading local newspapers



Your customers will be hearing about PEAK with RUST-GUARD (the exclusive CSC combination of anti-rust ingredients) . . . at home, on the road, and in public places for six star-studded weekends over NBC's 190 powerful radio stations starting September 13. It's the biggest anti-freeze selling program in radio network history. And it's a PEAK exclusive.

Your customers will be seeing and listening to the details of the Expert Dealer Pre-Winter Checkup service on radio and in newspapers. And they'll be looking for the sign of the Expert. Feature PEAK this year and discover for yourself how this proven sales plan creates new anti-freeze customers, helps overcome price competition, and boosts related winter item sales.

Don't forget, there's a special allowance of \$.06 1/2 per

gallon for early PEAK deliveries. This is given so that you can offer GUARANTEED ANTI-FREEZE PROTECTION. Order now from your PEAK and NOR'WAY® Anti-freeze supplier. Tie-in and sell more.



AUTOMOTIVE CHEMICALS DEPARTMENT • COMMERCIAL SOLVENTS CORPORATION • 260 MADISON AVE., N. Y. 16, N. Y.



FOR SAFETY'S SAKE!

SELL MONRO-MATIC SHOCK ABSORBERS

Check the shocks on *every* car that goes up on your lift. Efficient shock absorbers are as important to safe driving as good brakes and steering. Monro-Matics, the only shocks with automatic adjustment for all roads, all loads, provide a smooth, cushioned ride, and stabilize the car, keep wheels from bouncing out of control, prevent accidents.



SHOCK ABSORBERS ARE A REALLY HOT ITEM!

Motorists are more safety conscious than ever. They welcome the suggestion to install new Monro-Matics when you show them the danger of riding on old worn shocks. Wide-awake dealers the country over are ringing up many thousands of dollars in Monro-Matic sales. The shock absorber business is big business.

60-DAY FREE RIDE PLAN

If your customer is not fully satisfied with Monro-Matics after 60 days' use, just re-install his worn shocks. Through your jobber, you receive—*free*—a new set of Monro-Matics to replace the ones returned by the customers.

GUARANTEED LABOR REFUND

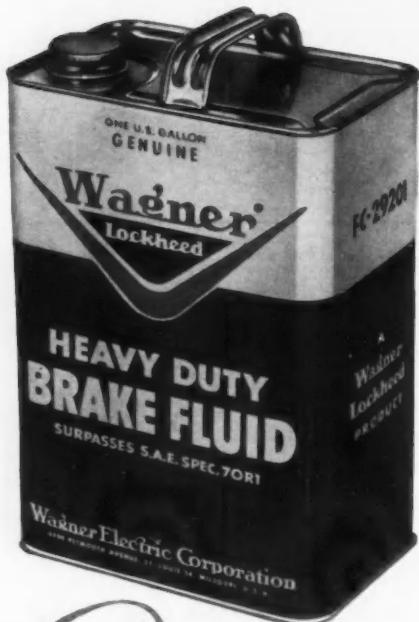
If you ever need to re-install a customer's old shocks, after he's had the 60-Day Free Ride, we'll send you a \$4.00 labor adjustment. This Monroe policy protects your profits.

MONROE AUTO EQUIPMENT COMPANY

MONROE, MICHIGAN

World's Largest Maker of Ride Control Products

SPECIAL OFFER



NEW FORMULA
Wagner Lockheed
HEAVY DUTY
BRAKE FLUID
at a popular price
with a handy dispenser

This *Special Offer* introduces a new Wagner Lockheed Heavy Duty Brake Fluid and offers the finest practical brake fluid dispenser available—at a reduced cost to you. Wagner's new heavy duty fluid, the result of an outstanding chemical development, meets present requirements of the automotive industry. It surpasses SAE heavy duty brake fluid specification 70R1, and is popularly priced.

Wagner Lockheed No. 21B Super Heavy Duty brake fluid, which surpasses SAE specifications 70R1 and the new 70R3, will continue to be marketed as Wagner's highest grade of brake fluid.

YOU GET...
5 = 1 GALLON CANS WAGNER
LOCKHEED BRAKE FLUID
1 = BRAKE FLUID DISPENSER

YOU SAVE \$3.45

REGULAR 5-1 Gallons Wagner Lockheed
PRICE Heavy Duty Brake Fluid at

\$3.93 gal.....	\$19.65
1-Brake Fluid Dispenser.....	\$ 7.35
TOTAL VALUE \$27.00	

YOUR SPECIAL PRICE

5 Gals. Brake Fluid and Dispenser
 (same as regular price 6 gals. fluid) **\$23.55**

YOU SAVE \$ 3.45

Prices Subject to Change Without Notice

You Can't Miss With a
Return of More Than \$200.00
Dispensed in 2 oz. Refills at 75¢ each

YOU BET, I'M INTERESTED!

Wagner Electric Corporation 6498 Plymouth Ave., St. Louis 14, Mo.

Send me the special offer—5 one-gallons Wagner Lockheed Heavy Duty Brake Fluid with the handy dispenser—for \$23.55 Dealer Net Price.

FIRM NAME _____

ADDRESS _____

CITY & STATE _____

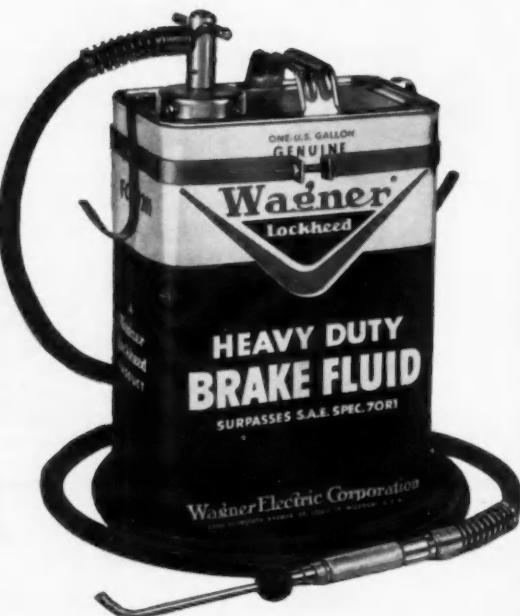
OUR ORDER NO. _____ **DATE** _____

SIGNED _____

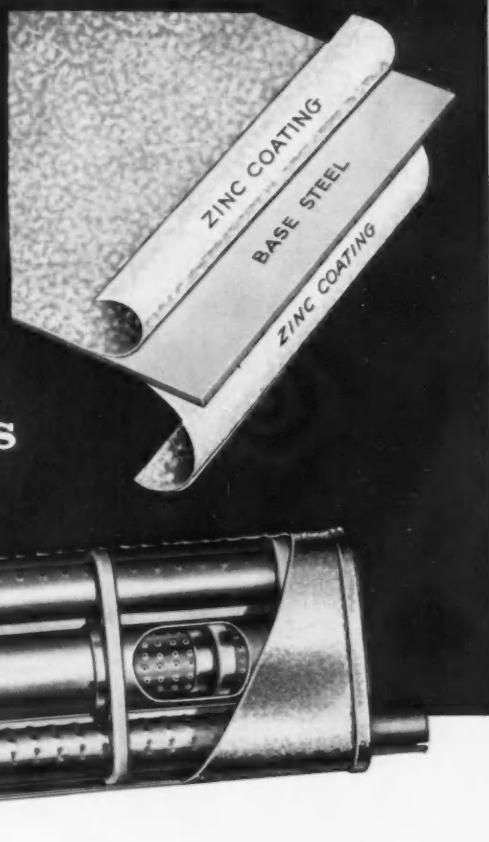
MY WAGNER JOBBER IS _____

WF58-9

ONLY \$23.55
DEALER NET PRICE



coated steels,
heavier steels,
anti-rust design
on 3 out of 4
MERIT mufflers



That's why MERIT outlasts them all

Here are premium-quality muffler features at no extra cost. They will help you prove to your customers that Merit gives longer service and better performance.

ANTI-RUST DESIGN New scientific principle of even heat diffusion. Constant even flow of hot exhaust gases sweeps dry every muffler chamber. Corrosive moisture is sharply reduced—a big reason why Merit lasts so much longer!

HEAVIER STEELS Merit oval shells are 33% thicker—.048 in., compared with only .036 in. on competitive mufflers. Outer heads are up to 67% thicker, too. Merit mufflers are almost invariably pounds heavier than competition—up to 45% heavier!

COATED STEELS All Merit mufflers for 1955 or later models, plus many older ones, have this extra-life feature. Coating on two sides gives double protection against corrosion. And there's 33% more steel as well—no wonder Merit outlasts them all!

MERIT DEALER SIGN Big curb sign works for you 24 hours a day! Height, 6 ft. 3 in.; width, 4 ft. Two-sided. Four colors in high-gloss enamel. Low price includes free panel (atop sign) with choice of messages.



Make your move to

MERIT
MUFFLERS AND PIPES

now

Dept. 15-J, 619 Smith St., Toledo 1, Ohio



Now it's Steve Big TV Shows, and Outdoor Guaranteed

Television!

STEVE ALLEN SHOW ON THE
NATIONWIDE NBC-TV NETWORK!

Seven weeks of Steve Allen will sell all America on Du Pont "Zerex" with this top-rated Sunday night TV program! Here's the best possible setting for this year's dramatic new "Zerex" commercials! Get set for extra business every day—for *rush* business on Mondays after Steve ("Zerex") Allen sends "Zerex" customers to you.

Now's the time to put your G. A. P.* program to work!

Here are five ways you'll profit:

1. Sell more "Zerex" because your G. A. P. Program lets you offer early winterizing service. Your free "Zerex" Fall Display Kit gives you all that's needed to tie-in with Du Pont advertising.
2. Sell more "Zerex" with your G. A. P. Program by giving your customers the assurance that their first cost is their last cost for the best all-season anti-freeze protection.
3. Your G. A. P. Program helps you sell more related cooling system items by emphasizing the need for complete cooling system service!
4. You outsmart non-servicing competition which can't offer a G. A. P. Program—and it cuts down on "do-it-yourself" installations, too!
5. G. A. P. ties your customers to you by bringing them back to your place of business for periodic checkups.

*GUARANTEED ANTI-FREEZE PROTECTION



BIGGER THAN EVER "ANTI-FREEZE WEEK"!

You'll profit more than ever from Du Pont's special promotion to kick off the anti-freeze selling season early—"Anti-freeze Week"! Check map for the date in your area... then get set to sell!

(ZEREX®) Allen!

Plus Newspaper, Magazine, Will Sell Du Pont Zerex® and the Anti-Freeze Protection Program!

Plus! BRAND NEW HALF-HOUR

"SEE THE PROS" TV SPORTS SHOW!

To supplement the Steve Allen show, this all-new TV show will be MC'd by Glenn Davis, all-time Army and pro-football great, and will capture viewers by featuring action film of pro football's most exciting moments. The audience gets to go behind the scenes to meet celebrated pro players in on-the-field interviews! A real power-packed show to sell "Zerex".

Newspapers!

Large-space newspaper ads will hammer home to your customers the reasons for specifying "Zerex" . . . tell them all about your new Guaranteed Anti-freeze Protection Program!



Sat. Eve. Post!

"Zerex" will participate in the "Automobile Americana" color spread in the Saturday Evening Post during the start of your anti-freeze selling season! A strong "Zerex" message will reach 22 million readers of this top-selling magazine—many right in your area.



Billboards!

Strategically located billboards will be constantly reminding your customers to buy "Zerex" and be chemically safe—will reach many while they're in their cars! Great for getting them to drive into your place for "Zerex".



Plus this extra push for Zerone®!

A special campaign in newspapers featuring several ads each week will reach motorists who use economy anti-freeze—will remind them they can save safely with "Zerone", America's largest-selling economy anti-freeze . . . the *only* economy anti-freeze made and backed by Du Pont!



START ENJOYING PLANNED PROFITS NOW WITH...

GUARANTEED ANTI-FREEZE PROTECTION



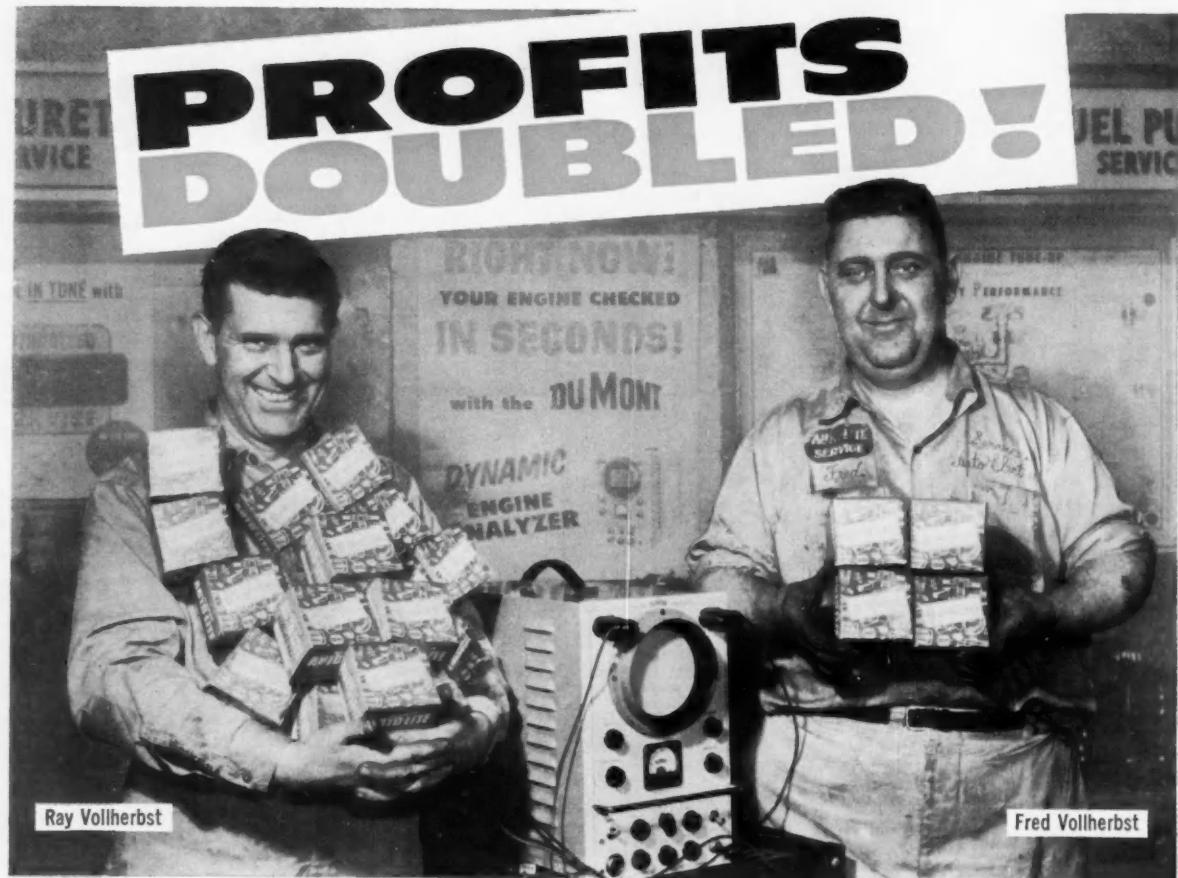
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING... THROUGH CHEMISTRY

"ZEREX" is the premium permanent-type anti-freeze made and backed by Du Pont.

"ZERONE" is Du Pont's standard economy-type anti-freeze—tests prove no boil-away.





Ray Vollherbst

Fred Vollherbst

with the **DU MONT**[®] *EnginScope**

"Profits doubled with the Du Mont EnginScope!" that's exactly what Fred and Ray Vollherbst of SERVICE AUTO ELECTRIC CO. of Union, N. J. say . . .

And all over the country, from hundreds of garages, service stations, car dealers, comes the same story; a good mechanic and an EnginScope is the winning combination when it comes to earnings . . .

The Du Mont EnginScope helps the skilled mechanic find electrical and mechanical faults in motors in the fastest time. In the hands of the modern mechanic, the EnginScope becomes the most important piece of equipment in the shop.

Right now, put yourself in this profit picture—get all the details . . .

9 OUT OF EVERY 10 AUTOMOTIVE SCOPES IN USE ARE DU MONT

Automotive Equipment Department, (Dept. MA-9)
ALLEN B. DU MONT LABORATORIES, INC.

760 Bloomfield Ave., Clifton, N. J.

- Send complete details and free check list.
 Arrange demonstration in my shop.

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____ CITY _____



*Trade Mark

PRICE.
IgnitionScope
\$495
EnginScope
\$725

SPORTS PAGE

Thespis on First Base

WHEN Kevin Joseph Connors walked into Shor's, lunchers looked up at his tan hair, partly because it grows almost six and a half feet above the floor and partly because there's so much of it, curling at the ends where the jacket collar rubs his neck, with sideburns down to the angle of his lean jaw. Was this mane the badge of the actor or just a souvenir of his latest role?

"It's a simple matter of economics," he said. "There are two kinds of movies—modern and old-time. In the old-timers, including Westerns, the hair is long. You go in with a short haircut and you don't get the part. For a modern picture it takes twenty minutes to get a haircut. It takes three months to grow a crop like this."

Chuck Connors, as he has been billed since he started making faces at cameras instead of pitchers, is a first baseman turned square who had one time at bat with the Dodgers ("Burt Shotton really gave me a great chance") and played sixty-six games with the Cubs. Right now he's "out front" of a United Artists release, "The Big Country," which offers Gregory Peck with Jean Simmons, Carroll Baker, Burl Ives, Charles Bickford and Charlton Heston.

Connors is Buck Hannassey, a singularly unappetizing cowboy who gets properly plugged through the gizzard and, dying, crawls thirty feet over flinty earth. "Willie Wyler made me crawl over those rocks sixty-two times, never on pads. He's the John McGraw of directors."

O Careless Dodger Day

In 1949 Connors was a rookie in the Dodgers' camp in Vero Beach, Fla., trying to live down a sinful past as a Seton Hall College basketball player. He tried out for first



VIEWS OF SPORT
By Red Smith

base, performed an elaborate card trick in camp entertainments, recited "Casey at the Bat" and did an imitation of Branch Rickey which enchanted everybody except Rickey and his manager, Shotton.

"When the season opened I was on the bench and Gil Hodges played first. He was going terrible, not hitting at all. I sat there two weeks and one night Rickey told me 'If Hodges has another bad day, you're playing.' I'll be honest, I hoped Gil would be terrible, but he came out of his slump and hit everything."

"After about two weeks, Shotton sent me up to bat for Carl Furillo against Russ Meyer of the Phillies. We were two runs behind in the ninth. I hit hell out of the ball, straight back to Meyer for a double play. Next day I was batting cleanup—for Montreal."

"But, Chuck, weren't you in the Yankee organization before you joined the Dodgers?"

"How did you know that?" he asked, and bared forthwith a sordid tale of crime against the amateur code.

"I was a Brooklyn school kid and didn't know anything," he said, "when I talked to Larry MacPhail. I wanted to go to college and he said yes, the Dodgers would send me

(Continued on page 81)



You'll dance a jig or two yourself as you see your satisfied customers leaving happy and coming back for more. Timken® bearings for replacement jobs will help you get repeat business built on quality. Tell customers they're getting "Timken". It's a name they know as the *best*, and the best-known name in bearings. The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ont. Cable address: "TIMROSCO".

CUSTOMERS LOVE YOU WHEN YOU REPLACE WITH AMERICA'S BEST-KNOWN BEARING...JUST TELL 'EM IT'S...

TIMKEN
TRADE-MARK REG. U. S. PAT. OFF.
TAPERED ROLLER BEARINGS

Chilton's MOTOR AGE, SEPTEMBER, 1958

mister jobber executive

MOTOR AGE: JOBBER EXECUTIVE EDITION

IASI Show Offers Fla. Trip as Prize

International Automotive Service Industries Show has announced a grand prize of a free trip to Florida for two. Prize will be drawn from the attendance cards deposited during the two opening days, Feb. 20 and 21. Show will be held Feb. 18 thru 21. Place—the Navy Pier in Chicago.

"Charge Plates" For ASTE Tool Show

Borrowing from department store charge account techniques, the American Society of Tool Engineers will supply visitors to its Western Tool Show with metal plates. The plates will have the visitor's name, address, title and company embossed on them. Called the "Inquiry Time Saver" the metal plates will be presented at exhibitor's booth when additional information, literature or a follow-up call is wanted. The Show will be held in Los Angeles, Sept. 29 to Oct. 3. Site will be Shrine Exposition Hall.

Anti-Freeze Sales Estimated

Approximately 115 million gallons of anti-freeze will be sold this winter, makers of "Prestone" anti-freeze predicted. The 56 million passenger cars in U.S. comprise 75 per cent of market for anti-freeze. Trend toward use of all-winter or ethylene glycol anti-freeze is expected to continue.

Sales in this category are estimated to reach 85 per cent of total anti-freeze sales. Or approximately 98 million gallons. Sales season for anti-freeze begins as early as August in extreme northern areas; continues well beyond January 1 in California and the southern states.

Glass Dealers Hear Chase

William B. Chase, president of Shatterproof Glass Corp., delivered keynote address at first annual Central States Conference of the National Auto and Flat Glass Dealers Assn. Place was Kansas City, Mo., August 16. Purpose of conference: To provide helpful information to those in the auto glass trade.

Wholesaler Group Offers Scholarships

The Greater Muskegon and Grand Haven Automotive Wholesalers Assn. is financially helping the "Automotive Instruction in Our Schools" program. This Michigan association gave the Automotive Service Trades Industry five \$200 scholarships. To be used for high school graduates continuing their studies at the Community College.

Term "Automotive Service Trades Industry" embraces all classifications of their customers: Car dealers, repair garages, service stations and fleet owners.

Crackdown On False Pricing

Government agents toughening up a crackdown on false pricing. Phony price comparisons and pre-ticketing with false "list" prices are special target. FTC officials have set new rules on fictitious pricing. They are the toughest yet.

Rules outlaw use of price comparisons where higher price is more than usual in the trading area. Also prohibited is pre-ticketing at a price higher than maker, wholesaler or merchant will currently sell a product. Use of fictitiously high list prices in an ad, catalog, or price list is outlawed. List price must be price at which an item is usually sold.

Operation JOBBER

Profitable Customer Follow-Up

IN practically every list that describes a wholesaler's function, these ten basic operations appear most frequently: Buying—including inventory control—Receiving, Order Control, Credit, Order Picking, Packing, Pricing and Invoicing, Accounting, Adjustments, and Shipping—including delivery.

If a wholesaler does not perform them efficiently, there can be little hope for success.

However, little has been written or said about customer follow-up. Wholesalers with good management and attentive personnel see this function in the right light. They know that a follow-up system is valuable. Can be relied upon to increase sales volume in good times or bad.

A smooth-running customer follow-up system comprises many things. Important is a "store attitude." The customer is king. Anything within reason should be done to please him.

Twin Keystones

Since service and availability are twin keystones of automotive wholesaling, how good is your follow-up on routine orders? Is every order processed accurately? Quickly? Does customer get a definite answer on availability? Price? Delivery?

Wholesalers on the average re-

ceive hundreds of telephone calls a month which could be classified as inquiries. Some concern merchandise, prices, parts for older or orphan vehicles. Others request technical information about goods to be purchased. All telephone inquiries, or those verbally received by your salesmen, should have preferred attention. Each should be followed to a conclusion. Extra sales can result from a dogged system that pins down every detail.

Many times inactive accounts offer ground for increased sales volume. If customers gradually drift into the inactive list, there is usually some good reason. Follow-up program to this group involving personal calls, telephone interviews or personal letters, can produce astounding results. Why not dig up twenty-five inactive accounts and try the follow-up system? It's dollars to doughnuts, some important sales will result. If not, you will at least learn why a potentially good customer isn't buying. It's just as important to learn why people aren't buying as it is to know why they buy.

Outside salesmen and countermen—the best ones—are natural advocates of customer follow-up. They know that with fine merchandise, when they can answer all questions and promise to give prompt delivery, an order is as-

sured. Other salesmen who fail to complete a sale, for various reasons, usually are fair to poor on follow-up. Many times when you turn the spot light on a "lost sale," you will find many questions that were not answered to the customer's satisfaction.

Follow-up Dividends

Customer follow-up can pay rich dividends to jobber salesmen who not only do a good job stocking dealers, but also follow-up checking and replenishing the stock at intervals. The smart, aggressive salesmen drawing the big pay checks just naturally do an outstanding job of customer follow-up.

There is no finer way to build new business and keep customers in a buying mood than quickly checking customer complaints. When these are handled in rapid-fire order, the customer feels he's dealing with a reputable firm. Conversely, a slow, indefinite, follow-up system takes only one course—loss of good will and the customer.

It's the little things that count. They form a fool-proof business-getting follow-up program. When they are totaled, they produce bigger accounts, happier customer.

Most vital to you, they increase sales and add money to the bank account.

signs of the times . . .

Safety-Check Awards Announced

Great Bend, Kansas and Huntington County, Indiana, have been named Grand Award winners for conducting the outstanding city and county Community Vehicle Safety-Check programs in the nation.

Teen-agers in San Leandro, California were selected winners of a new "Circle of Safety" Grand Award for the outstanding teen-age sponsored Safety-Check. Teen-agers in Greeley, Colorado and Orange County, Florida won "Circle of Safety" awards for outstanding assistance in city and county Safety-Check programs.

National Awards of Excellence for top city Safety-Check programs by population groups went to: Oelwein, Iowa; Painesville, Ohio; Greenville, South Carolina; Gary, Indiana; and Seattle, Washington.



Bendix Power Brake Technical School conducted by the Electric Equipment Company of Los Angeles. Standing at far end instructing group are: W. L. Koupal, Bendix zone manager (left); and D. G. Simpson, Electric Equipment Company's assistant educational director.



Attending a recent cocktail party honoring the new Philadelphia warehouse and offices of Auto Equipment & Service Company, Inc., Motor Age publisher Russ Case happily signs the register while Editor Frank Tighe watches. In background are (from left): T. K. Harp, AESCO vice president and assistant general manager; R. A. Harp, president and general manager; Donald Schmeling, sales manager of Carter Carburetor Division; and John McCuen, AESCO sales manager.

Yearly Student Shortage Cited

A total of 89,258 automotive vocational students are enrolled in schools across the nation, according to National Standard Parts Association's "Automotive Instruction In Our Schools" program. These figures represent a ratio of 1 automotive student to every 3,012 vehicles registered.

It is estimated only 22,314 of these enter the trade each year. This is a ratio of one student to every 3,012 vehicles registered.

Richard Buckley, association secretary, said that there is one technician for every 87 vehicles needing service. He said a "healthy ratio" would be 1 to 60.



In parade dress, 34 trailers loaded with battery testers and chargers of Marquette Mfg. Co. leave Minneapolis for distant parts of United States and Canada.

Space Drawings Next Month

Space drawings for the 1959 International Automotive Service Industries show will be held next month, October 2 and 3, at Chicago's Pick-Congress Hotel.

Drawings will begin at 9:30 AM by classifications. Manufacturers may send a representative, although it is not essential.

The 1959 I.A.S.I. show will be held February 18-21, at Chicago's mammoth Navy Pier.

Du Pont Schedules Anti-Freeze Week

For the benefit of dealers handling "Zerone" and "Zerex" anti-freezes, the Du Pont Company is sponsoring Anti-Freeze Week for the seventh successive year. The annual promotion is designed to get the anti-freeze selling season away to an early start.

Sales Manager T. A. Parriott announced the largest anti-freeze advertising campaign in Du Pont's history. Besides newspapers, magazines and billboards, emphasis will be concentrated on television. Co-sponsorship of the Steve Allen Show is planned during the anti-freeze season.

Because of varying climatic conditions, Anti-Freeze Week will be observed in New England and other northern states September 22 to 28; in the central states October 13 to 19; and in the south October 27 to November 2.



Bill McConnel (seated), chief mechanic and test driver, and Jack Owen, Thermoid engineer, collaborate in Thermoid Company's new brake service film.

Ford Sells Simca Interest

Ford Motor Company recently sold its minority interest in Simca, French automobile manufacturing firm, to Chrysler Corporation.

The Ford interest—amounting to 443,973 shares or 15.2% of the shares outstanding—was acquired when Ford Societe Anonyme Francaise, Poissy, France, was merged with Simca in December, 1954.

President Henry Ford II explained:

"Our ownership in Simca was an investment which arose out of the merger of our French manufacturing subsidiary with Simca. It has not been a factor in our plans for developing products or providing capacity to meet the growing vehicle markets in Europe and elsewhere around the world."



The Big Four Henderson Tire Changer, produced by Big Four Industries, Inc., will be seen with co-stars Tom Ewell and Mickey Rooney in the forthcoming 20th Century Fox movie, "A Nice Little Bank That Should be Robbed." Ewell (left), proprietor of a one-man auto repair shop, operates the tire changer (seen between him and Rooney) during a ten minute sequence.

Membership Book

The Automotive Warehouse Distributors Assoc. recently released its 1958 Membership Directory. Affiliate manufacturers are included.



Guaranteed Parts Company, Inc., recently celebrated 50 years as a basic ignition parts manufacturer in the replacement industry with a national sales meeting at Aurora Inn, located in upstate New York. Seated on the front row are (from left): Richard Oughterson, advertising manager; Jack Friedlander, sales manager; A. Villiers, general manager; Marco Hecht, president; Elizabeth Falvey, comptroller; and Yola Giansante, accountant.

GM Appoints General Manager

Prior to his retirement, GM President Harlow H. Curtice announced the appointment of Byron L. Stewart as general manager of the Guide Lamp Division at Anderson, Indiana.

Stewart, director of personnel for GM's Delco-Remy Division since 1952, succeeds Clarence A. Michel, who is taking a leave of absence for health reasons prior to his retirement December 31, 1958.

Stewart, a graduate of Wabash College (Ind.), joined GM's Delco-Remy Division in 1926. He served in a variety of production assignments prior to his appointment as director of personnel.

Announces New Market Plan

A new approach to stimulate use of Bear wheel weights and other service supplies has been announced by Mr. Victor B. Day, President of Bear Manufacturing Company, Rock Island, Illinois.

A "Bear Prize Bonanza" cou-

Air Conditioning Reaches Maturity

Automobile air conditioning has enjoyed considerable success in recent years. In fact, it has now reached the age of maturity.

This was the conclusion reached by The Automotive Air Conditioning Manufacturers Association at a recent Dallas, Texas meeting.

The Association found that some confusion exists among struggling new companies. Presently, some 15 companies are recognized as established.

Additional reports revealed that the present summer, although one of the coolest in recent years, has supported flourishing sales.

pon is included in each box of Bear wheel weights, shims and coil spring spacers it was revealed by Mr. Day. Each coupon combines the functions of (1) a prize point certificate, (2) a program rules sheet, (3) a prize order form, and (4) prize illustrations. The service supply user is told everything he wants to know on each coupon.

Students Attend Training Program

Harold Wilson, Manager of General Motors Training Center, Minneapolis, recently welcomed 12 young men to a new training program.

One or two students were selected from automotive classes in each of the participating Minneapolis high schools and trade schools. Delco Remy electrical systems and tune-up were covered the first week. The second week was devoted to Rochester carburetors.

Students received privileges of mechanics who attend schools at the General Motors Training Center.

Auto-Lite Creates Boat Training

The growing tide of enthusiasm for boating has created an unusual demand for marine servicemen.

To meet this need, The Electric Auto-Lite Company has prepared a training course for marine servicemen. It's designed to teach servicing of marine electrical systems, and also as a refresher course. Training will be held during the evening.

AEA Committee Plans Conferences

The Manufacturers Advisory Committee of Automotive Electric Association has outlined plans for six regional conferences in 1959.

The sessions will emphasize both management and general business problems. The committee also reviewed a new AEA tune-up training course intended for independent repair men and service station employees.

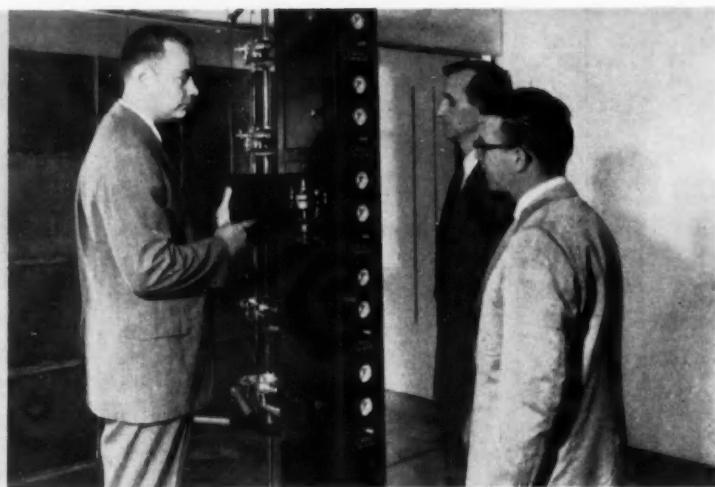
AP Offers Special Program

A sales program for signing up selective dealer prospects is being offered to wholesalers by the AP Parts Corporation.

The program is fundamentally one of direct mail coordinated with personal calls by salesmen. AP mails four special sales folders (one a week for four weeks) to dealer prospects selected by the wholesaler. Salesmen will then call on these dealers. "The program has proven highly successful since over half of the dealers contacted have been signed as new AP dealers," Mr. Stivers said.



Fibber McGee and Molly, radio's famed husband and wife comedy team, are two of many stars who will speak on NBC Radio's "Monitor" this fall for Peak and Nor'way anti-freeze. Sponsored by manufacturer Commercial Solvents Corp, campaign is hailed as largest anti-freeze promotion in radio network history.



William Brooks, chief instructor at Binks Manufacturing Company's spray painting school, explains theory of electrostatic spray painting to two attentive students. Course in electrostatic spray painting was added to complete school's curriculum.

Automotive Wholesalers' Sales and Inventories

Data from Bureau of the Census, Department of Commerce

Per Cent Change

Region	Sales			Inventories		
	June 1958 from June 1957	June 1958 from May 1958	6 Mos. 1958 from 6 Mos. 1957	June 1958 from June 1957	June 1958 from May 1958	
New England	+19	+6	-3	-8	-4	
Middle Atlantic	+5	+4	+3	+6	+2	
East North Central	+4	+1	-4	+11	-9	
West North Central	+6	+4	+5	-7	0	
South Atlantic	+3	-1	-1	+3	-1	
East South Central	+10	+11	+3	-3	-3	
West South Central	...	+3	-2	
Mountain	+12	...	+6	...	+1	
Pacific	+4	+12	...	0	+1	
United States	+5	+1	+7	+2	-3	

Indicators of Business Activity

These figures are based on latest thirty-day reports

	Latest Data	Month Before	Year Ago	Percentage Change from Month Ago	Percentage Change from Year Ago
PRODUCTION					
Motor Vehicles (Units)	388,572	406,857	594,212	- 4.5	-34.6
Industrial—F. R. B. 1947-'49=100 (Adj.)	130	128	145	+ 1.6	-10.3
SALES					
New Cars	425,000	410,607	543,264	+ 3.5	-21.8
Replacement Tires (Units)	7,181,826	6,219,854	6,190,543	+15.5	+16.0
Manufacturers (\$ Millions)					
Durable Goods	\$12,025	\$11,643	\$14,207	+ 3.3	-15.4
Non-durable Goods	\$13,680	\$13,563	\$13,935	+ 0.9	- 1.8
Department Stores, 1947-'49=100	134	133	138	+ 0.7	- 2.9
GENERAL					
Consumers' Price Index, 1947-'49=100	123.7	123.6	120.2	+ 0.1	+ 2.9
Civilian Employment	65,179,000	64,981,000	67,221,000	+ 0.3	- 3.0
Unemployment	5,294,000	5,437,000	3,007,000	- 2.6	+76.1

Lamp Company Plans Transfer

The C. M. Hall Lamp Co., Detroit automotive parts supplier, will transfer its flexible-shaft manufacturing department to newly-leased quarters at Clinton, N. C., in the near future, Harry D. Hirsch, president, revealed.

Mr. Hirsch said the move will provide space needed in the Detroit plant to expand production of stainless steel honeycomb structural material for aircraft and missiles.

MEWA Pledges Show Support

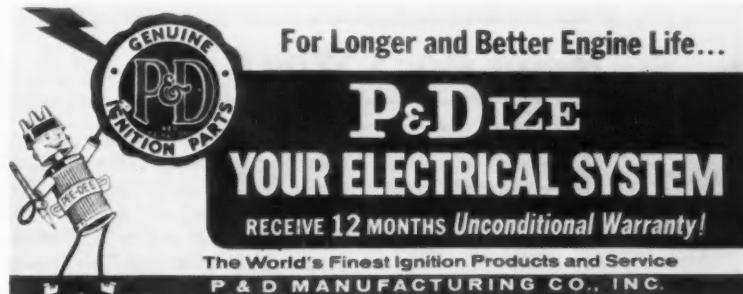
Motor and Equipment Wholesalers Association recently pledged a four-point resolution supporting the Pacific Automotive Show and other product shows.

It also recommended the establishment of a trade show board (or committee) to avoid date conflicts and trade shows activities. The MEWA draft calls for the jobber group to conduct meetings complying with the PAS at San Francisco, March, 1959, at Denver, March, 1960, and other Pacific Automotive Shows thereafter.

Sales-Promotion Plan Announced

McQuay-Norris Mfg. Co. recently announced a new sales and promotion plan for its chassis parts line.

The plan is designed to aid front end specialists with labor and sales problems. Besides dealer aids, it offers a set of three new puller tools to remove and replace idler arm rubber bushings.



For Longer and Better Engine Life...

P & D IZE

YOUR ELECTRICAL SYSTEM

RECEIVE 12 MONTHS *Unconditional Warranty!*

The World's Finest Ignition Products and Service

P & D MANUFACTURING CO., INC.

Warranty card issued by P & D Manufacturing Company, Long Island City, N. Y. assures customers of a one year warranty on all parts. Card is part of an enlarged campaign to persuade customers to P & D-ize electrical systems every twelve months, thus protecting against mechanical failure and insuring warranty indefinitely.

Shaefer New ITE Chairman

Harry W. Schaefer, Automotive Equipment Manager of the John Bean Division (East Lansing, Mich.), succeeded Frank Bredimus as chairman of the executive committee of Equipment and Tool Institute.

Bredimus is president of Philadelphia's Globe Hoist Company.

Schaefer paid tribute to past-president Bredimus at ETI's annual membership meeting in Detroit recently. ETI is composed of some 60 companies serving the automotive equipment and tool industry.

Prestone Holds Baseball Contest

A nation-wide baseball contest for Prestone anti-freeze dealers and employees was recently concluded by National Carbon Company, Division of Union Carbide Corporation. Cash prizes will be awarded to 83 contestants making the closest predictions of final standing and games won by each of 16 major league teams.

Trade, Labor Issues Examined

A two-day session on trade and labor problems was held recently for MEMA members at New York's Lexington Hotel.

Counsel Benjamin Werne conducted round-table discussions of problems facing both industry and employers. The two day session was divided into morning and afternoon meetings.

Werne plans to conduct a similar session shortly in Chicago for midwestern members.

NSPA Issues Annual Survey

The 1958 Edition of NSPA's operating ratios and cost of doing business survey for automotive wholesalers marks the twenty-sixth year it has provided this research.

The report is based on 1957 figures supplied to the Marketing Research Department from the nation's automotive wholesalers.

Thirty products, or product categories, that contributed one-half of one per cent or more of automotive wholesalers' total sales volume are again included.

Motor Age's Who's Who



Fremont Fisher has been appointed general sales manager for The Electric Auto-Lite Company's Electrical Products Group. He will headquartered in Toledo, Ohio.

Robert J. Muth has been transferred from Los Angeles to the Philadelphia headquarters for Exide Industrial Division of The Electric Storage Battery Company, as field sales manager.

Dan Potts has been appointed district manager for the states of Ark. and Okla. for Moog Industries, Inc.



Larry Cambridge has been appointed sales manager of Merit Mufflers. He joined the company in 1952 and worked as territory manager in the Indiana area until his present promotion.

Ray Conlon has been appointed sales manager of the Automotive Chemicals Division of Park Chemical Co.

William P. Shelton has been named territorial manager of the automotive division of the Martin-Senour paint company in Iowa and Minnesota.



Paul J. Greenfield has been promoted to the position of director of merchandising of Simoniz Company. In his new assignment, he becomes a member of the company's marketing executive group.

New sales representatives have been announced in three territories of C. M. Hall Lamp Co. They are: **Kanner-Schank & Associates** for Ohio; **San Miller** for Rocky Mountain Region and **Ray Jesselson** for eastern Canada.

Robert M. Tetzlaff has been appointed sales promotion manager for Blackhawk Mfg. Company.



John Mullenmaster, left, has been elected to the position of vice president and director of sales in a reorganization of the Owatonna Tool Company's sales department. **Robert Allyn**, right, heads the eastern sales division and **William Murray** heads the western sales division.



Roy Vetzner, left, formerly sales manager of Vaco Products Co., has been named vice president and director of sales. **Sam Pollock**, a director of the company, has been named executive vice president and treasurer.

New assignments bringing management changes to three United Motors Service sales zones of the General Motors division are as follows: **Raymond J. Pomel**, New York zone manager; **Gordon W. W. Trask**, Atlanta zone manager and **Raymond F. Ehler**, Boston zone manager.

L. A. Richardson has been appointed president of Purolator Products (Canada) Ltd. He has had forty years' experience in the filtration equipment field. Richardson formed the Canadian company of Purolator in Toronto in 1944.



Charles J. McCarthy has been appointed to the position of Product Sales manager of automotive original equipment at the General Tire & Rubber Company's Bolta Products Division in Massachusetts.

J. C. Mabe, vice president in charge of plant operations has been elected to the board of directors of the Chicago Pneumatic Tool Co.

Daniel J. Webster has been named general sales manager of Tung-Sol Electric Inc. He will direct all field sales activities including electronic and automotive original equipment, distributor, export and government sales.



Arthur F. Connolly has been appointed sales manager of Simoniz Company, Chicago.

Harry G. Boyle has joined Allen B. DuMont Laboratories, Inc., as assistant division manager for industrial sales in the firm's Industrial and Military Equipment Division.

Derek Richardson has been appointed vice president of aluminum sales, Metals division, Olin Mathieson Chemical Corporation. He had been sales manager of the Corporation's Industrial Chemicals division.



MOTOR AGE

newscoop

GM's New Top Officers
Chicago Auto Show
AMC Riding High
Motorama Scheduled
IGO Elects Officers
Edsel's '58 Sales
Air Pollution Conference

In the days ahead.... HERE'S WHAT TO LOOK FOR!!!

General Motors Elects Top Executive Officers

FREDERICK G. DONNER, elected chairman of the board and chief executive officer of General Motors Corp.... John F. Gordon named new president and chief operating officer.... He succeeds Harlow H. Curtice, who retired as president and chief executive officer under GM's retirement plan.

Both Curtice and Albert Bradley, who retired as chairman of the board, will continue as members of GM's board and of the finance committee.

Speculation On Chicago Auto Show

CANCELLATION OF AUTO SHOWS in Cleveland and Columbus give rise to speculation that Chicago show may be abandoned for 1959.... Chicago Automobile Trade Assn., sponsor of show, denies rumor.... Says plans are going ahead full speed.

Floor space already assigned for 18 makes of cars.... Show scheduled for Jan. 17-25.... Will also feature foreign cars, as well as trucks.

Oops—Beg Your Pardon, Julie!

IN AUGUST MOTOR AGE NEWSSCOOP we reported November 22 date for 46th Annual Detroit Auto Show.... That's true.... However, we were wrong in saying that it would be the "country's first major dealer-sponsored show of 1959 cars."

Julie Driscoll, executive secretary, Philadelphia Automobile Trade Association, burned our ear because the Philadelphia Automobile Show opens the same day and bears all the ear-marks of being a resounding success.

No New Development In Auto Lighting

AUTO INDUSTRY HAS REACHED limit in optics with its dual headlamp system, lighting engineers point out.... No new development in auto lighting expected for many years.... When it comes it may be as advanced as change from open bulb lighting to present sealed-beam system.

New Officers For IGO Of America

AT THEIR RECENT ANNUAL CONVENTION in Los Angeles, members of Independent Garage Owners of America elected Ray J. Campbell as president for 1958-59.... Campbell, a resident of Denver, Col., was previously first vice president.

Other officers chosen were: H. G. (Red) Reagin (Atlanta, Ga.) as first vice president; Art Kittell (Pittsburgh) as second vice president; George Millikin (Youngstown, Ohio) as 3rd vice president; and George Millinger (St. Louis, Mo.) as secretary-treasurer.

Motorama To Be Held In October

GENERAL MOTORS CONFIRMED reports that it will resume its Motorama spectacular.... Last held in 1956.... It'll be held Oct. 16-22 at Waldorf-Astoria Hotel in New York City.... Moves to Boston for nine-day run following month.

Top talent of international stage being booked for 30-minute stage show....Theme of show--"Imagination in Motion."

AMC Riding High

AMERICAN MOTORS wound up its 1958 model year last month.... It rang up total sales of 135,606 Ramblers.... 76.5 per cent increase over 76,827 units sold in previous fiscal year.

Continuous climb in sales throughout year pushed Rambler up from 12th place in industry sales into 7th place.... Question: How long will the success ride continue?

L-Head Six-Cylinder Engine On Way Out

LAST OF L-HEAD SIX-CYLINDER engines expected to bow out at end of next year.... Chrysler has under development a new overhead valve 6-cylinder engine.... Plans to introduce it on its 1960 Plymouth and Dodge line.

More Business For Paint Shops?

BUICK WILL OFFER its 1959 line in single tone body colors (with only white as a complementary color).... Could mean more business for independent paint shops.... Many dealers will be farming out jobs if customers still prefer two-tone combinations.... Several other car companies expected to follow Buick's lead.

1959 Buick will limit color combinations to only 25 compared with over 3000 in past.... Reasons: Less complication in production; fewer dealer inventory problems.... Buicks go on sale Sept. 19.... A month ahead of last year's date.

Edsel Disappointed Over '58 Sales

EDSEL WINDS UP PRODUCTION ON its first-year car this month.... Unhappy over sales results.... Through mid-July Edsel sales in area of 50,000 units. Company estimates sales for entire model year at between 60,000 and 65,000.... Long way from original expectation of 200,000.

"Facelifting" Thing Of Past

DAYS OF "FACELIFTING" AN AUTO are gone, points out one car company official.... "Public wants something fresh every year.... We've got to provide it without spending \$20 to \$30 million for just the body shell die for each line," he comments.

Use of one basic body for several makes was one move to reduce tooling costs.... Companies will now be able to put more emphasis each year on other "visible" exterior features.... And provide more distinction to individual car lines.

What Vintage Cars Are Best Service Prospects?

ACCORDING TO AEA, there are more than 2.6 million cars 10 and 11 years old that need service.... But, they are not your best bet.

Five to nine-year-old units are best prospects, says Assn..... 24 million cars in that age group are still on road.... Next best prospects are those in 3 and 4-year-old group which number 11 million.

Automotive Congress At Vienna

ABOUT 200 U. S. CAR DEALERS will gather in Vienna on Sept. 17.... They'll attend automotive congress to be held under sponsorship of the International Office for Motor Trades and Repairs.

NADA will be represented officially.... Dean Chaffin and Frederick Bell, president and executive vice president, are to be on hand.

Chrysler Still Considering Small U. S. Car

CHRYSLER'S TIE-UP WITH SIMCA of France still does not rule out small U. S. built car.... Chrysler seriously considering a smaller domestic car for possible introduction in 1960.... It has two 106-in. wheelbase cars clayed up.... They could bring out these cars within 18 months should it decide to go ahead.

Air Pollution Conference Scheduled

EXHAUST GASES FROM AUTOS sure to be talked about at a Washington meeting on Nov. 18-20.... Those are dates for first national conference on air pollution.... Taking part will be scientists, businessmen, government men.

Some will look into causes, extent, and effects of impure air.... Others will try to come up with ideas for reducing pollution.

Driving Habits Of Motorists

GIVE LONG-TRIP DRIVERS plenty of room.... They are likelier than most to exceed speed limit, Bureau of Public Roads learns.... Young women, men between 25 and 29, and new car drivers also are faster-than-average motorists.

Research on driving habits helps Bureau do its job.... Agency certifies new highway projects where federal funds are used.

Service Stations Doing More Service Work

EVIDENCE THAT SERVICE STATIONS are continuing to place more emphasis on service work pointed up by UMS.... Through June, nearly 9200 mechanics from service stations and independent shops took advantage of the training courses offered.... Compared with slightly over 7500 last year.... Percentage increase for service stations was higher than for independent garages.

Plans Open House

NADA AND AUTO MANUFACTURERS are putting in groundwork for Open House program.... Planned for next spring, it is to be an eye-opener for public.... Showing full range of auto industry activities, problems.... Is not designed as a sales-boosting stunt.... Planners met on this project in August.... May be ready for another meeting in September.

Refunds Due Insurance Buyers

BUYERS OF AUTO DAMAGE INSURANCE are still owed millions of dollars in refunds... Perhaps as much as \$16 million.... Because insurers put buyers in a too-high risk class.

Senate subcommittee looking into refunds finds them going well in New York, Pennsylvania, a few more states.... But in others, state officials have failed to make sure refunds are paid.

FTC Hits Fake Pricing

FAKE PRICING IS TO BE HIT HARD by new Federal Trade Commission Rules.... Targets are bogus "bargain prices," price tags with fake list prices, misleading price comparisons.

FTC wants to stop advertising of nonexistent markdowns.... And ads claiming bigger markdowns than are offered.... As new trade practice codes are written, FTC will install tougher rules.

Rear Lights Most Often Defective

REAR LIGHTS REMAIN ITEMS most often defective on cars and trucks.... As shown by 1958 National Vehicle Safety-Check program.

Inspectors in more than 2,000 areas checked 3 million cars and trucks.... They recorded 113,000 cases of faulty rear lights.... Another 74,000 of defective brakes.... And 72,000 cases where front lights needed attention.

Post Office Delays Penalty Charge

BUSINESS AND PRIVATE MAIL USERS get one break from Post Office Dept. It's a postponement until Oct. 31 of penalty charge on mail without enough postage.... Penalty was to have gone into effect Aug. 1, when postal rates went up.

Beginning Oct. 31, anyone getting mail lacking postage will have to pay postage due, plus 5¢ penalty.... Or refuse to accept mail.



Florida Automotive Center Finds Formula for Volume

*Take top teams of mechanic specialists . . .
Add the factor of sound shop management . . .
Answer: volume business and volume profit!*

AT Goff's Automotive Center in Miami, Fla., brothers L. M. and J. K. Goff have assembled teams of specialists in 16 different automotive services. Teams turn out an average of more than 50 vehicles a day. The jobs range from minor tune-ups and lubrication to engine overhaul and body rebuilding.

Tight supervision over time and close co-ordination between supervisors and foremen of the various departments keep the production rolling. At least half of the vehicles serviced require attention from more than one department.

The Goffs procedure calls for the customer to talk directly to a white-uniformed mechanic in whose department his problem lies.

"In our operation, the mechanic who checks the trouble and analyzes it becomes our salesman," explained Lew Goff, the firm's president. But, once the mechanic has explained to the customer what should be done, the customer's contact then goes to a supervisor. He does the pricing and work scheduling.

Thus, the supervisor maintains control over estimates and over the work flow. If the work to be done involves another department, he can check with the supervisor of that department. Find out how it will be handled. He does so before giving the customer a firm promise on when the car will be ready.

"If a customer doesn't get his car on time,
(Continued on next page)



Firm's officers L. M. Goff (at left) and J. K. Goff check over production reports. Photo at right shows mechanic checking one of the fleet units serviced by Goff's.





Formula for Volume . . .

Continued from preceding page

Extensive analyzing and testing equipment permit mechanics to give customers a quick diagnosis of their auto problems.



he may never come back to us," Goff explained.

This coordination by supervisors is further emphasized by the firm's fleet work. Goff's regularly services about 60 commercial accounts, with fleets ranging from two to 20 trucks, Lew Goff said.

"This is very good business because of the steady volume it brings in," he said. "But it always must be expedited—a business man with a truck out of service is never happy until the truck is back in operation."

So the fleet work must be turned out promptly. This problem goes back to the coordination by the supervisors; their control over the work flow in their own departments.

Lew Goff, who managed a similar but larger service operation in Los Angeles before returning to Miami to join his brother, said he had never believed in a dispatch system for work control. "You can't expect figures to eliminate your problems."

The Goffs maintain master cards on each of the fleet units serviced. They stress preventive maintenance in this field. If a truck comes in, the master card is pulled out and checked for possible preventive steps. Should such work be indicated, the customer's purchasing agent is called for authority to do the work.

One fleet serviced by Goff's is an ambulance fleet of 16 units which must be kept in

top operating condition at all times.

The coordination by supervisors helps to make the specialization at Goff's pay off. There always is a problem of one department being busier than another, so this work load must be balanced off. There are many ways of doing this. For example, on a valve job, a tune-up man who will have to work on the car anyway is used to remove the head and take it to the general repair department. Often the electrician and a tune-up man combine their work on a single car. As another illustration: On a major tune-up job on a car also scheduled for a brake job, a brake man is sent to the car to jack it up for the brake job, rather than waiting for the car to be moved to his department. Two tune-up men, meanwhile, turn out their part of the job. In addition, while all Goff's men are hired as specialists, they are versatile mechanics. They can be switched to other departments if a bottleneck occurs.

Goff's is organized into three chief sections. One, supervised by Jimmie Goff, has engine overhaul, wheel alignment, wheel balance, brake work, and conventional transmissions.

Lew Goff, with a supervisor working under him, controls tune-up, lubrication, electrical, radiator shop, tire and battery work, automatic transmissions and air conditioning installation and repair.

The third major department is the paint and body shop. Departmentalized into two units and headed by a supervisor. With the parts department, Goff's employs 32 men. Greatest strength is in tune-up and in heavy mechanical.

Some of the policies which contribute to Goff efficiency are:

1. All mechanics are salaried specialists. "We find a good man in his particular field, give him a decent income, one that he can count on," Lew Goff said. "He makes a satisfied and reliable employee, one who has the good of the shop in mind as he works." Goff's also keeps a training program going steadily. "Normally, we have three promising young men in training. We put each one under a good man and teach him our methods."

2. Use of exchange units. This practice is used extensively to cut down job time and "get the cars back to their owners." For ex-

ample, on late model V8 valve jobs, exchange heads are kept on hand already built up. "By using exchange heads, we can cut a nine-hour job down to four hours," Mr. Goff said. The removed units then can be rebuilt at the bench during slack shop time.

Similarly, exchange units are kept on hand for carburetors, distributors, generators, voltage regulators and automatic transmissions. "With this system, we can do from 12 to 15 major tune-ups in an eight-hour shift," Mr. Goff said.

"Right now I have about 35 carburetor units under the bench awaiting rebuilding," he said. "If we can't get those rebuilt during dull shop time, we will schedule the men for some night work and clean up the back-log. But in the meantime, we have saved our customers waiting time."

3. Design of the shop. All work being done is readily visible. Customers who wish to are free to watch the work being done on their cars.

"We have found that customers like this plan. They seem to resent the fact that in some service operations the car is whisked away somewhere," said Jimmie Goff.

Extensive testing and analyzing equipment in all departments enables the mechanics to give the customer a quick verdict on what

(Continued on page 78)

Mechanic's tools are kept in mobile work cabinets.





Electra four-door hardtop. Wheelbase is 126.3 in.

BUICK

Complete new line for '59

*First of the 1959 models with its announcement,
the new Buick will appear in three
series and a clean, functional appearance*

FIRST in the industry to make its 1959 announcement, Buick boasts an entirely new line consisting of three basic series. Each bears a new designation—LeSabre, Invicta, and Electra.

From a styling standpoint, Buick offers dramatic lines. Accent is on the dominant line running downward from the crown of the front fender to the rear fender—without a break.

In the line-up of models, both LeSabre and Invicta are mounted on 123 in. wheelbases. The Electra 4700 and the Electra 4800 are on 126.3 in. wheelbases.

Mechanically, Buick offers a 364 cu. in. engine and a 401 cu. in. powerplant. An important change for 1959 has been made in the optional air ride system. The new suspen-

sion retains coil springs at the front. Offers air springs only at the rear. Self-leveling is effected thus at the rear where there is usually greater weight variation.

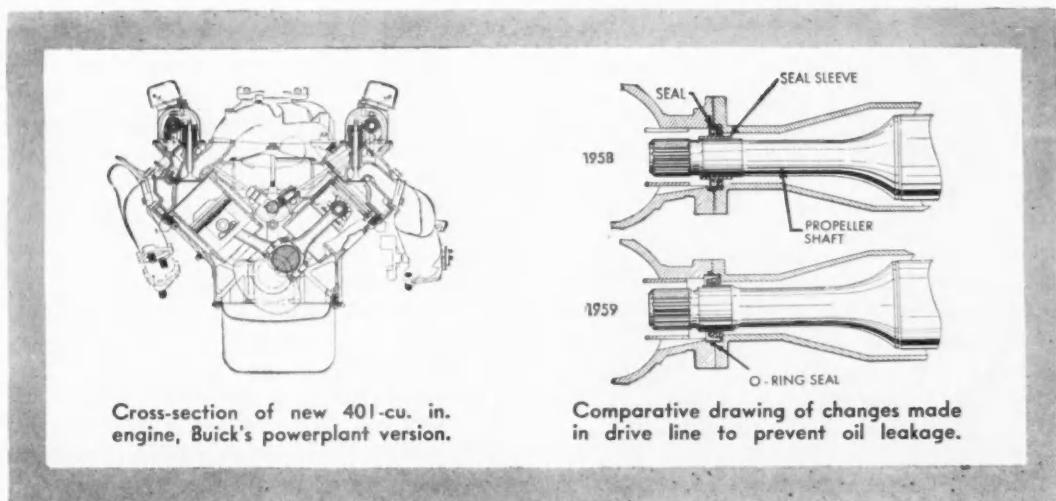
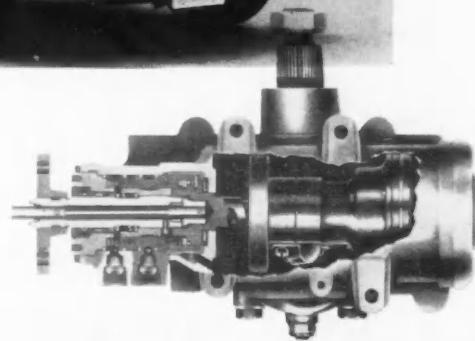
Coming to the details of the engines, the 364-cu. in. engine remains substantially the same, except that compression ratio has been upped to 10.5 to 1 on all cars equipped with Twin- or Triple-Turbine transmissions. With the standard synchromesh transmission compression ratio is 8.5 to 1.

For maximum economy, a smaller venturi, two-barrel carburetor is employed, calibrated to operate as leanly as possible. The distributor has been carefully designed to provide a strong spark at the right time. In addition, a new spark plug with an extended

(Continued on page 85)

The Electra two-door hardtop. Note the unbroken, downward-sweeping line and uncluttered look.

Below the two-door model is a cut-away view of the new rotary valve, inline power steering gear.



Cross-section of new 401-cu. in. engine, Buick's powerplant version.

Comparative drawing of changes made in drive line to prevent oil leakage.



Management Story of the Month



New Director of Parts and Service, Weldon Birchfield (left) receives Service Manager (center) Vernon Durbin's report. Joe Murray, parts manager, is at right.

When Parts and Service departments coordinate...

Oh, how the **VOLUME GROWS!**

New executive post harmonizes parts and service divisions

NANCE Buick in El Paso, Texas has tried something new in the way of executive posts. Owner James Nance wanted to see if a better way existed for co-ordinating the parts department and the service department.

He thinks he has hit on it: The establishment of the job of Director of Parts and

Service. To man this new executive post, Weldon Birchfield, former service manager at the dealership, moved up. The post of service manager went to Vernon Durbin.

As the setting up of the job of Director of Parts and Service was a new venture, there were no past experiences to draw on. However, from his own experiences around the



Parts Manager Murray (left) talks to independent shop owner, one of several daily visits.



Reports demand two hours a day of Service Manager Durbin's schedule.



► Service salesman is present during business hours, has service authority.

► Birchfield examines a new file system for the parts department.



Scrap, other "junk" is collected regularly.



dealership, Birchfield was aware of some of the items that could be improved.

For one thing, he knew that the counter men tended to let the shop's mechanics wait while they attended to outside wholesale customers. This was understandable, from the parts department's point of view. Wholesale customers were only getting a 40 per cent discount. And this extra profit helped the parts department's monthly report look good to the auditing department.

By the same token, when it got down to one item left in the bin, shop mechanics were denied it. This "last item" was reserved for wholesale customers. This was just sound business sense under the old system.

(Continued on page 96)



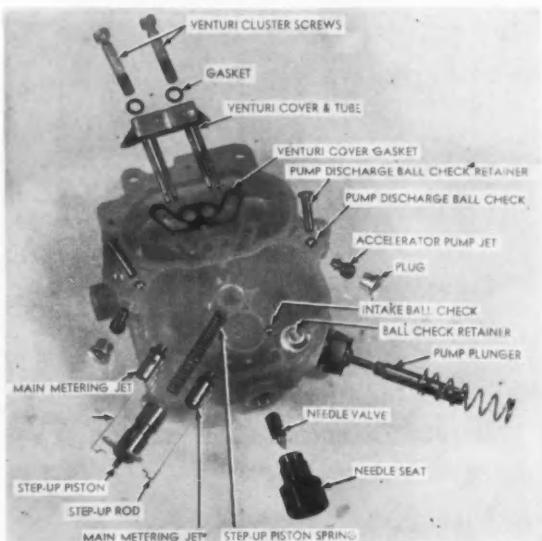
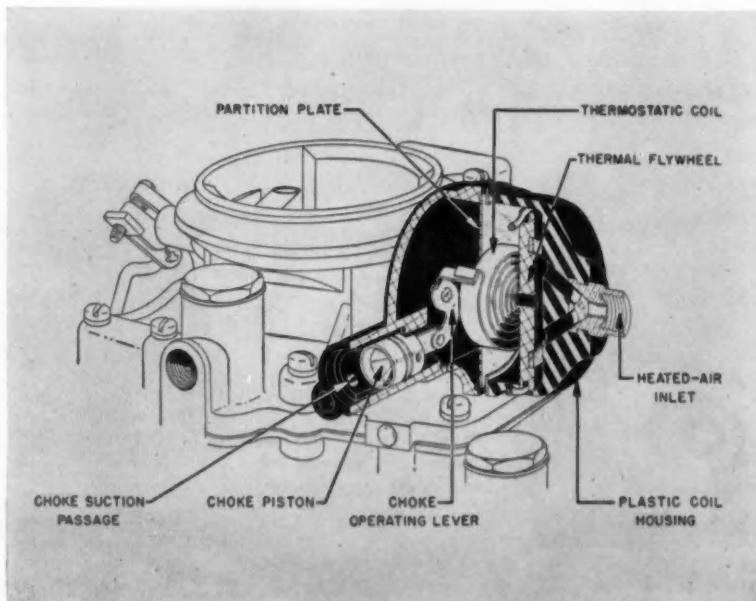
Mechanical Story of the Month

Fuel Economy thru Complete

By JOHN K. MONTGOMERY
Technical Editor

Cutaway of a typical automatic choke. All parts must be free and in working order for the choke to function properly.

Below: Exploded view of the parts that should be removed, cleaned and examined on a carburetor overhaul.



GOOD carburetion and fuel economy depends on the engine being properly tuned in accordance with the manufacturer's specification. This should include spark plug cap, ignition timing, cam dwell and proper valve tappet clearance if adjustable. The manifold heat damper valve must be free and operating normally, also the cooling system thermostat must be in good working condition.

It is impossible to get good carburetion, unless the water temperatures are maintained. The intake manifold should be checked for air leaks, and eliminated before carburetor can be adjusted. Check the tubing

*Insure maximum fuel economy and peak performance by
adjusting carburetors to the manufacturer's specifications*

Carburetor Service

connections for the windshield wiper and the vacuum pump.

Check the carburetor to manifold attaching stud nuts for adequate and even tightness.

On four barrel carburetors give the engine ample time to warm up. As the throttle body of a four barrel is so large it takes time to warm the manifold and carburetor base thoroughly. When setting the carburetor, a Tachometer or vacuum gage should be used to keep a constant indication of the engine idle speed throughout the procedure. When the engine is thoroughly warmed, adjust the speed to the manufacturer's specifications.

Adjusting Idle Mixture

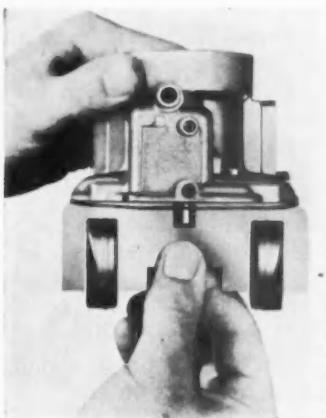
Test procedure for adjusting the idle mixture is to set the idle speed with the transmission in drive to the manufacturer's specifications, which is usually around 400 rpm's.

Then turn the idle adjustment screw clockwise and watch the tach until it reaches what is known as the drop-off point. At this point observe the slant of the adjustment screw slot. Then turn the screw counterclockwise until the tach reaches the drop-off ridge.

Compute Travel Distance

Note the new position of the screw slot. Compute the travel and return the screw half a distance. Repeat this operation with the right hand screw. After making these adjustments, listen for even firing of the engine and watch for vibration, which will be readily seen by movement of the radio antenna. Go to the rear of the car and listen for even firing rhythms as the exhaust gases leave the tailpipe. A popping noise here could indicate a slight leanness. If it is present, turn each idle adjustment screw counterclockwise slightly until the engine has

(Continued on page 50)



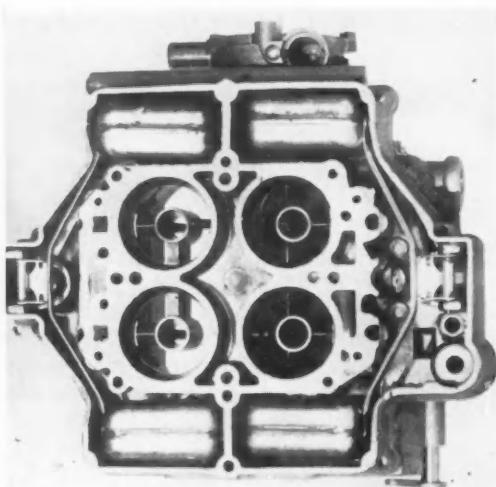
Left: Special gage in position for checking float level on Rochester carburetor.

Right: Measuring float drop on a Rochester carburetor.



Complete Carburetor Service

Continued from page 49



Above: Cutaway carburetor body used to check the position of float.

reached a point of maximum smoothness. Recheck the engine idlespeed. At this point only a slight adjustment, if any, will be required.

Carefully inspect the automatic choke and check the choke tube and passage to make sure that it is not drawing moisture out of the intake or exhaust manifolds. Sometimes these heat tubes burn out and cause a lot of trouble in the automatic choke.

Check Air Cleaner

The air cleaner must also be checked over very carefully. A dirty, soiled filter element or one with oil dirty or too high in the reservoir will restrict the air flow to the carburetor and lead to a rich mixture in all speeds. This, of course, will show of in one phase an excessive gasoline consumption. As a rule the air cleaner should be cleaned and refilled at least every five thousand miles. In the case of the papertype filter, which a lot of the new cars have, it should be replaced in most cases. Sometimes it may need only a slight cleaning.

On the carburetor it is most important to

check the float level. On some engine the fuel sighthole is located in the carburetor float bowl, which can be used to check the fuel level. On other jobs it will be necessary to take the cover off and use special gauges, provided for to check and measure the float level.

Automatic Choke Adjustments

Automatic choke adjustments should be checked on all jobs. A choke thermostat is calibrated to give satisfactory performance with regular blends of fuel when it is placed at the standard factory setting. However, in some instances it may be necessary to move it a degree or so one way or the other. Most automatic chokes are marked lean or rich and are adjusted by loosening the screw and rotating the cover in the proper direction. When making either a lean or rich setting, change one point at the time and test results with engine cold until the desired performance is obtained.

Check the fast idle and choke unloader adjustments if: 1) The engine operates on fast idle too long after engine is started; 2) moves to slow too soon; 3) the choke unloader does not operate properly.

On cars equipped with automatic transmission they usually have a dash pot which prevents the engine from stalling when accelerator pedal is released rapidly. If car has a tendency to stall under these conditions, the dash pot should be adjusted to take care of this situation or replaced.

Fuel Pump Inspection

If a fuel pump is suspected of supplying an improper amount of fuel to the carburetor or shows any signs of leakage, it should be tested as follows: With engine running, check for leaks at all gasoline fittings, fuel pump, gasoline filter and carburetor. Inspect the flexible line and pipes for kinks and dents which would restrict the flow of fuel. Check for leaks at the fuel pump diaphragm and tighten the cover screw. Disconnect the line at the carburetor and crank the engine with the high tension leads disconnected so the engine will not fire. Place a suitable container at the end of the pipe, crank engine for a few revolutions. If only a little gasoline comes out of it, the fuel pump should be taken off and examined.

If gasoline flows in good volume from the pipe it may be assumed the fuel pump is in good working condition. To make certain, attach a pressure gauge to the disconnected end of the gasoline pipe of the carburetor. Then turn the engine at 450 to 1000 rpm on gasoline in the carburetor bowl and note the reading on the pressure gauge. If pump is good the pressure should read 4 to $6\frac{1}{2}$ lbs. and remain constant at speeds between 400 and 1000 rpm. If pressure gauge is connected at pump outlet instead of the end of the feed pipe, the pressure should be $4\frac{1}{2}$ to 7 lbs.

Driving Habits Affect Economy

When handling customers complaining of excessive fuel consumption, point out to the customer that sometimes driving habits will seriously effect fuel economy. They include high speed driving, frequent and rapid acceleration, driving too long in low speed, grades when getting away and excessive idling accelerations, frequent starts and stops, congested traffic, poor roads, hills, mountains, high winds, low pressures, misalignment and so forth.

High Speed Hurts Economy

High speed is the greatest contributor to poor gas mileage. Air resistance increases as the square of the speed. For instance a car going 60 miles per hour must overcome air resistance 4 times as great as when going 30 miles per hour. At 80 mph the resistance is over 7 times as great as when going 30 mph.

It is a good idea to recommend a quality fuel additive to prevent moisture and possible freezing of the fuel lines at the time of the tune-up. This will prevent possible breakdown in cold weather.

Exhaust Gas Control Valve

Check the thermostatic spring to make sure it is attached properly on the stop pin. Make sure the spring holds the valve closed when the engine is cold. Move the counterweight by hand to make sure it moves freely through its range without binding.

The valve is designed to open when the engine is at normal operating temperature and is operated at high rpm. Free stuck valves with a penetrating oil and graphite mixture.

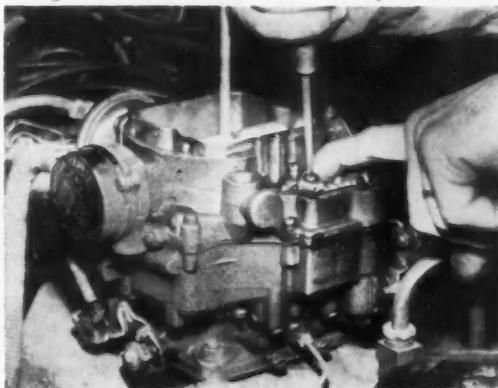


Float level should be checked on all tune-ups.



The automatic choke thermostat should always be set to the manufacturer's specifications.

Good mileage is obtained by setting the metering rods to the manufacturer's specifications.



October 1958

MOTOR AGE
ASL

MOTOR AGE'S



QUICK CHECKS FOR QUICK PROFITS

SUN.	MON.	TUES.	WED.
5 	6 COOLING SYSTEM WEEK	7 "PREPARE YOUR CAR FOR WINTER NOW. COOLING SYSTEM CHECKS SHOW HOW"	8 1 
12 	13 BATTERY WEEK	14 "A BATTERY CHECKED FIVE WAYS INSURES HAPPY DRIVING DAYS"	15 
19 	20 DISTRIBUTOR WEEK	21 "FOR CAR PERFORMANCE WITHOUT A MAR CHECK THE DISTRIBUTOR OF YOUR CAR"	22 
26 	27 CARBURETOR WEEK	28 "IF YOUR CAR IS SLUGGISH AND SLOW CARBURETOR CHECKS WILL MAKE IT GO"	29

Let Motor Age's
MERCHANDISING CALENDAR WORK FOR YOU

MERCHANDISING CALENDAR

NAMES OF EMPLOYEES					
Sales					Week's Sales
Service					
Score					
Sheet					
First Week					
Second Week					
Third Week					
Fourth Week					
Total Monthly Sales					

THURS.	FRI.	SAT.
9	2	10 3 11 4
		<ul style="list-style-type: none"> ✓ Check & drain cooling system; add anti-freeze. ✓ Check entire system for leaks. ✓ Check thermostats, water pump & radiator cap. ✓ Check fan belt tension & condition. ✓ Check radiator & heater hoses & clamps.
16	17	18
		<ul style="list-style-type: none"> ✓ Check & clean cables, connectors & terminals. ✓ Check & inspect cables for worn insulation. ✓ Check & inspect battery for cracks & leaks. ✓ Check individual cells for gravity. ✓ Check & set regulator to specifications.
23	24	25
		<ul style="list-style-type: none"> ✓ Check & adjust breaker arm spring tension. ✓ Check condition of contact points. ✓ Check & adjust point dwell. ✓ Check & test circuit & point resistance. ✓ Check & clean distributor cap & rotor.
30	31	
		<ul style="list-style-type: none"> ✓ Check & clean carburetor air cleaner. ✓ Check & clean carburetor fuel bowl & filter. ✓ Check & adjust float level. ✓ Check & adjust engine idle speed. ✓ Check & adjust idle fuel mixture.

CALENDAR REPRINTS NOW AVAILABLE

Motor Age's Merchandising Calendar available in reprint form on request; at no cost to you. The Calendar is double size and is on special paper. This offer is limited to thirty days after publication.

Send for your free Merchandising Calendar NOW!!

Write to the Editor of Motor Age, Chestnut & 56th Sts., Phila. 39, Pa.

HOW TO USE MERCHANDISING CALENDAR

When you receive your Calendar reprint, hang it in a prominent spot in your shop or service station. Place your employees' names in the Score Sheet. Then hold an informal sales and service contest. See who gets the highest sales score at the end of the month, by promoting sales and services mentioned in the check lists. As an incentive, offer a prize to the winner.



Abingdon, Virginia, proud of its State Barter Theatre, has provided traffic protection for the actors. The attractive prop is Walda Chandler, a second-year actress with the group.

HUMAN EVENTS



High winds and rain produced this desecration of a Shell service station sign in Tucson, Arizona.

► Brunette Terry Farrell is appropriately one of four candidates for Du Pont's Miss Anti-Freeze of 1958. Voting has ended at this writing and the judges' decision is expected soon.



► Patricia Vogts, this year's Miss Maryland, as she prepared for trip to sunny Long Beach, Calif., scene of the Miss United States pageant. Pat carried an affidavit confirming she has never married. Last year's Miss Maryland won the contest, later disqualified when it was learned she was married.

Belgium's Olivier Gendebien turns the Mulsanne curve in a Ferrari en route to his Le Mans victory. Gendebien divided the grueling 24 hour endurance contest with American partner Phil Hill.





1. Submersion test: used to reveal leaks in the valve or tire casing.

Step-By-Step

By David A. Jones, Accessories Sales Manager, A. Schrader's Son, division of Scovill Manufacturing Company

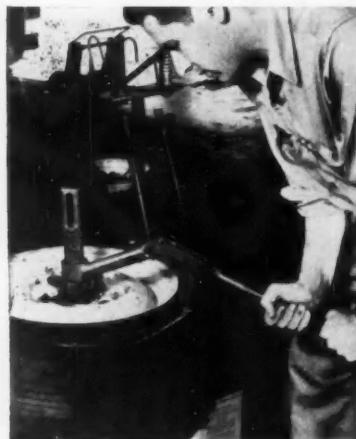
2. Applying pressure to tool handle, a mechanic removes a snap-in valve.



3. Using rim for leverage, mechanic installs a snap-in valve.



4. Special "bead-breaker" (never a hammer, etc.) is used for demounting.



5. Tire is carefully removed to protect rim-seal edges, bead toes.



Tubeless Tire Repairs

Read this story with care, for done properly the process is quick and profitable. And it will frequently lead to related sales.

WHY is tubeless repair on tires so important to both the serviceman and to the customer? First, to the serviceman tires represent a very profitable item in his overall operation. If done correctly, a tire repair can be quick. Tire inspection and proper evaluation can also lead to the sale of tires, valves, and other services and products. A correct installation also eliminates "comebacks."

A correct inspection, maintenance service and repair obviously protects the safety of the driver and his passengers. Their safety is certainly to your interest in terms of continued business and good will. By the same token, there is protection of the tire's brand name. An inefficient repair and tire breakdown may wrongly reflect on the brand you

(Continued on page 58)

6. Coating now removed, patch is rolled with a stitching tool.



7. Applying lubricant to damaged area of casing.



8. While fluid is wet, stem of compression rivet is pulled at a right angle through casing.



9. Third seal is formed by protruding, uncompressed shank which acts as a rivet head.

10. Mechanic inflates tire with safety chuck gauge, allowing him a safe distance in case of bead failure.



Repair of Tubeless Tires

sell. The manufacturer's brand name should be protected so that your tire sales may continue to prosper.

Need for More Knowledge

There have been some misunderstandings regarding tubeless repair. This state of affairs has not helped the shop or service station owner and his servicemen to tackle the job in the most profitable manner. There has also been the problem of poor or "second rate" repair supplies. Due to their inadequacies, these have turned some dealers against standard techniques. Thus cut down the dealer's effectiveness in repairing tubeless.

The purpose, therefore, of this article and accompanying photographs is to demonstrate the *correct* procedure for tubeless repair. To illustrate how quickly repairs can be made when they are done according to a standard procedure.

Water submersion is the most effective means of locating leaks in the valve or throughout the tire casing. Inflate the tire sufficiently to insure easy detection of air bubbles. Place the complete wheel assembly in a water tank and turn the wheel slowly. This motion will reveal not only leaks in the tire itself but also in the areas of beads, valve or rim.

Leaks Other Than Punctures

Visual inspection before the water test will show any obvious breakage or crack in the stem of the tire valve. Although rare, there have been cases where a vehicle comes too close to a projecting curb and a long stemmed valve is damaged. Or perhaps, due to the age of the tire valve the rubber which protects the valve's stem and allows for flex has deteriorated and even cracked. Valve core leaks are easily remedied by simply and quickly inserting a new one.



11. Serviceman insuring air-tight performance by applying new valve cap after final water test.



12. Check gauges for accuracy once a week. Inaccurate gauging equipment should be removed.

A more subtle but no less dangerous condition sets in when valves are used beyond the normal life of the tire. This type of deterioration, during its early stages, cannot be so easily detected since no specific rubber break or core malfunction shows at the time of mounting and testing the tire.

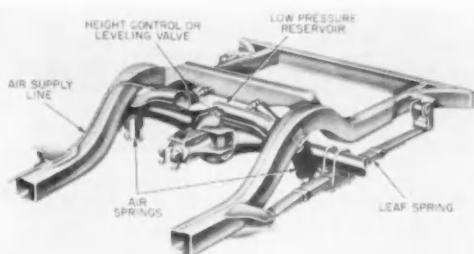
The tough construction of the snap-in type tubeless valve ordinarily allows it to outlast the life of a tire with a generous margin of safety. Tire life, however, is used as the

(Continued on page 90)

Preview of '59 Chrysler Line Mechanical Highlights

Fuel economy stressed; body changes reported extensive

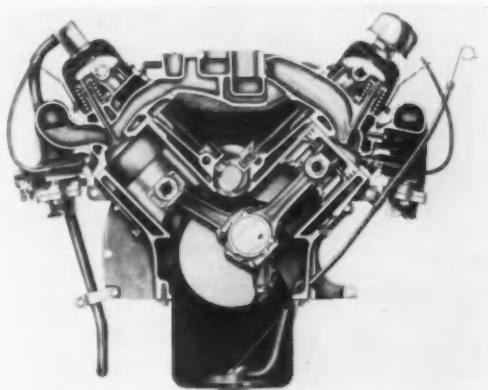
By Joseph Geschelin, Engineering Editor



View of frame showing air-suspension set-up at rear of car. Front end is revised Torsion-aire.

IT IS reliably reported that for its 1959 line of cars Chrysler Corporation has some 30,000 new part numbers. Body changes account for about four-fifths of this number. Sheet metal styling changes, therefore, are considerable.

From the standpoint of mechanical features, heading the list is the new alignment of engines. Engine availability has been changed materially. Reason? Introduction of two new powerplants—383 cu. in. and 413 cu. displacement. The former is available in the Dodge and DeSoto line on certain models.



Section view of the 413 cu. in. engine available on Chrysler division cars and on the Imperial.

The latter—the 413 cu. in.—can be had on the Windsors and Saratogas of the Chrysler Division line. (This same engine is found on the New Yorker, Chrysler 300E, and Imperial.)

Considered to be a major advance in comfort is the introduction of Chrysler swivel seats which are standard equipment on Plymouth Sports Fury models, DeSoto Adventurer, and Chrysler 300E. The seats are offered as optional equipment on Dodge Custom Royals, DeSoto Firedomes and Fireflites. Also all models of Chrysler and Imperial. They are not available on station wagons.

For 1959 also, Chrysler will stress fuel economy which is available by specifying an economy rear axle at no extra cost. Fuel economy gains up to 10 per cent are promised, with an economy axle with ratio of 2.93 to 1, and improved carburetor, available on all TorqueFlite transmission cars.

(Continued on page 82)



Merchandising Story of the Month



Carburetion & Tune-up go 'hand in hand'

How Shenk's Garage builds a high level of Customer Confidence

THE moment you step into the service shop of Clayton S. Shenk, you step into an atmosphere of cleanliness, comfort, and confidence. You are disposed to buy. That feeling of confidence that surrounds the customer is one of the main merchandising secrets of Shenk's Garage (Millersville, Pa.).

For the floor is clean and freshly painted. Shelves are orderly and heaped high with replacement items. And in each work bay is an impressive array of equipment.

Shenk's service shop specializes in carburetor and tune-up service. "Carburetion and tune-up go hand in hand," Shenk is fond of saying. It's a main principle he uses when explaining to customers what a tune-up can do for his car.

The easy, down-to-earth explanations of Shenk on tune-up work are a joy to listen to. Patiently and thoroughly he goes over the breakdown of a car's electrical and fuel systems. Shenk explains what he will test for. He tells why replacement parts are vitally necessary; why factory spec should be used. And he won't even accept a job unless a compression test is run in the customer's presence.

Tells Why He Tests

"If compression is bad, I tell them I won't handle the job. 'Get it fixed and then bring it back.'" Shenk thus refers many a ring and valve job to other shops in town. Likewise transmission work that is revealed during a dynamometer test.

At right: Clayton Shenk hitching leads from dynamometer to car's engine. At left on opposite page is front view of Shenk's shop. Building near pickup truck is where tune-up bays are located.



Above: customer gets detailed explanation of what service work will be done to carburetor and engine. Below, right: Mechanic readies exhaust gas analyzer.

By William H. Wolfe, Managing Editor

Shenk has installed plenty of equipment to handle his volume of tune-up work. Each of his two work bays in the Tune-up Department has a dynamometer. Conspicuously at hand is an oscilloscope and ignition testers. Over on the far wall's big work bench is a generator and voltage regulator tester also.

By each work bay is a neat pegboard rack of mechanic's hand tools. "Good work with good equipment" might well be the motto of Shenk's service bays.

Shenk's Garage can be viewed as two sections. The front part with its gasoline pumps, quick service, and lubrication and car wash bays; and 2) the Tune-up Dept., which oc-

cupies the side and rear sections of his buildings.

His lot runs between one-half and a full acre. He has wisely left room in the rear for expansion purposes. He handles muffler and tail pipe installations at his shop. Finds their volume high as a replacement item and a natural to work in with his complete tune-up check and service.

The tune-up work bays are manned by Shenk and mechanic Dick Garman—four years with the firm. The pump island area is held down by Bruce Lehr. An example of the merchandising awareness of this part of his business was brought home recently. In checking the fan belt of a customer in for gas, Lehr recommended a new belt. The customer's was obviously worn and cracked.

(Continued on page 100)





NEW PRODUCTS

SHOW WINDOW

320. Puncture Rivets

► A. Schrader's Son, Div. of Scovill Mfg. Company: Compression rivets aimed at 90 per cent of all tubeless tire punctures are available in a Super Service Outfit (No. 892). This percentage is computed on punctures not exceeding $\frac{1}{4}$ in. diameter. The rivets, each with its own wire for quick insertion, are designed to eliminate normal buffing operations and special tools. Made of gum-rubber compounds, they have a wide head to prevent slipping or being pulled through the puncture. The rivets seal the puncture from the inside of the tire, outside, and through the casing.



321. Fluid Dispenser

► Automotive Div., Wagner Electric Corp: A brake fluid dispenser is available as a special offer with the company's heavy duty fluid. It's included with five one-gallon cans, priced at the six one-gallon carton cost. The dispenser, suitable for mounting on a one-gallon can, pumps enough fluid with a single stroke for a normal replenishment.

322. Replacement Tube

Universal Choke Heater Company: "Uni-Heat", a replacement tube for automatic chokes is available. It fastens to the exhaust manifold and, reportedly, eliminates the need of removing useless heat tubes. Adaptable to all cars, it is said to halt automatic choke and carburetor failings; also save gasoline and prevent plugged passages.



323. Fire Extinguisher

▲ **The Glidden Company:** A handy aerosol-type fire extinguisher is offered in a 16-ounce container. Name: "S'Nuf." The company claims it will instantly extinguish gasoline, alcohol, other solvent fires. Also put out electrical and automobile fires. The extinguisher is designed to reduce the formation of dangerous gases produced by heat.

324. Heavy Duty Fluid

Automotive Div., Wagner Electric Corp: Announced a Lockheed heavy duty brake fluid surpassing SAE specification 70R1. It's available in 12 ounce, quart, one gallon, five gallon, 30 gallon and 54 gallon drums. Containers will bear red, white and blue colors.

325. Trailer Hitch

► **Tow-E-Z Trailer Hitch, Inc:** A "5th wheel" plate is employed in the company's hitch, which provides a load capacity of 500-1800 lbs draw-bar weight. The plate, with hardened rollers above and below, absorbs torque and gust loads. Shock is then reportedly transferred to a heavy duty spring. Two airplane-type, hydraulic shock absorbers control dipping or bucking. The company claims this design facilitates maneuvering and parking. Installation is by the "do-it-yourself" method: the Y unit bolts the car axle.

326. Air Filters

► **Purolator Products, Inc:** An air filter merchandiser (Filtair-Chek) designed to increase sales is available. The company claims it will check dry-type filters within 10 seconds. Also compare a motorist's present filter with a new one. Its purpose, other than boosting sales, is to convince motorists of the need for a new filter every 10,000 miles.

327. Sales Appeal

► **The B. F. Goodrich Company:** On the theory that batteries lack sales appeal when displayed, a line of 6 and 12-volt units has been developed with three textured panels and three bright colors. Offered in three grades ("Silver-tone, Pow-R-Pack, Electro-Pak"), the batteries have three vertical panels on the front resembling grid plates.

328. Point Set

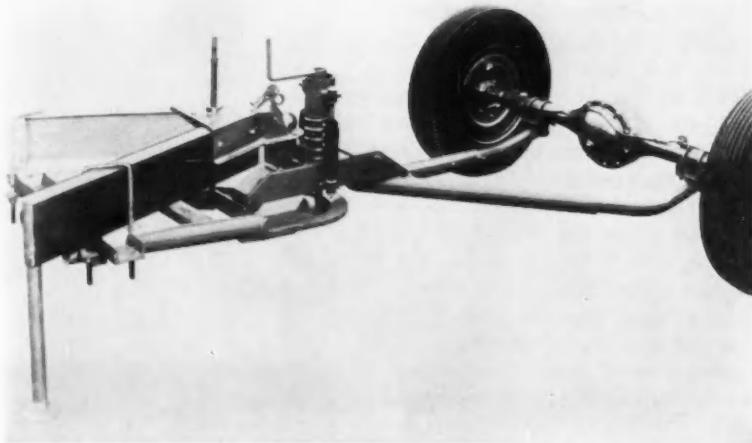
Sunnen Products Company: Offers a small-range point set (AG-140) to extend the range of any AG-300 precision gage. The set gages holes as small as .375-in. in diameter, and attaches without alteration. It's recommended for gaging foreign car pin fits, other small engines. Holes can now be gaged from $\frac{3}{8}$ to $3\frac{1}{8}$ -in. in diameter.



329. Stops 'Fisheye'

Ditzler Color Div., Pittsburgh Paint Glass Company: A "fish-eye" preventer has been developed that can be added to automotive enamels. By neutralizing the silicone it reportedly prevents annoying "fish-eye," caused by silicone contamination. This neutralization prevents the finish from cratering.

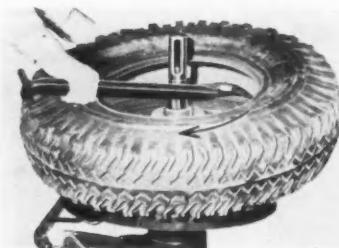
(Continued on page 64)





330. Tire Tool

▼ Coats Company: A tool designed to dismount and mount all tires (tubeless or regular) from 12 to 21-in. in diameter is available. It has a mounting device on the opposite end of the company's roller-action dismounting tool. Named "Combination Tool 3S-223," it will not harm tubeless sealing surfaces.



331. 1 1/2 Ton Lift

► Walker Mfg. Company: A 1 1/2 ton air-operated lift that will quickly raise cars to a height of 31-in. has been announced. The lift (No. 95) has an extra deep 14 1/2-in. forward reach to clear bumpers and chrome. This clearance, the company reports, allows the saddles to reach under and grip bumper brackets or lifting pads on long cars. Saddles adjust from 16 to 57-in. Twin safety locks provide protection against accidental lowering. A spring-loaded, front positioning wheel is designed for quick spotting.

332. Strong Piston

Thompson Products, Inc: A new forging process has produced a piston described as stronger, but not heavier, than cast aluminum models. Name: "Powerforged." Process involves forging aluminum slugs into piston forms with great force; also changing the grain flow and increasing metal's density.

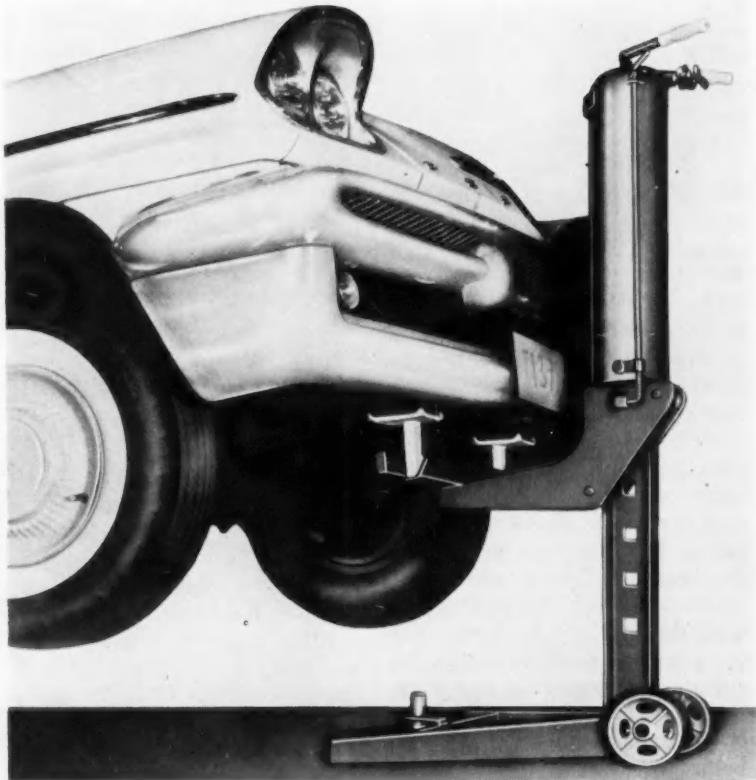
333. Splits Nuts

► The Gabriel Company: Offers a tool for garages and service stations that instantly frees frozen nuts from corroded, stud-end shock absorbers. Entitled "Nut-Buster," it's designed to relieve the tedious work of replacing shock absorbers. The tool, made of alloy steel, operates with an ordinary socket and ratchet. Several turns of the driving head splits the nut.

334. New Jack Hooks

Auto Specialties Mfg. Company: A relatively large load hook for any automobile bumper will be available with the company's twin-leg bumper jack. Named "Saf-Lift," the jack is 24-in. high. The top of the load rest also provides convenient lifting contact.

(Continued on page 66)



You Are Qualified to be a Member Of The Automotive Service League

This is a new and unusual organization open to all automotive service shops which have been qualified by Motor Age. If you haven't done so before, detach and return the postage free postcard below.

[The second and lower postcard is for more new product information.]



To MOTOR AGE

Please send me our membership plaque in the AUTOMOTIVE SERVICE LEAGUE.

We operate a Car Dealership Service Station
(check one) Repair Shop Specialty Shop

There are.....full time mechanics at our location.

Your Company

Your Name, Your Title

Address, Street & No. (City) (Zone) (State)

Frank P. Tighe, EDITOR MOTOR AGE
P.O. Box 102, Village Station, N. Y. 14, N. Y.

9/58

Please send me further information on the New Products, the code numbers of which I have circled below. (Be sure to circle the code number).

320	321	322	323	324	325	326	327	328	329
330	331	332	333	334	335	336	337	338	339
340	341	342	343	344	345	346	347	348	349
350	351	352	353	354	355	356	357	358	359
360	361	362	363	364	365	366	367	368	369
370	371	372	373	374	375	376	377	378	379
380	381	382	383	384	385	386	387	388	389
390	391	392	393	394	395	396	397	398	399

[Postcard valid for 90 days only.]

Your Name, Your Title

Your Company

Your Business: Wholesaler..... Repair Shop..... Car Dealer.....

Address, Street & No. (City) (Zone) (State)

FOR
LEAGUE
MEMBER-
SHIP

Please Note!

When filling out cards—
be sure to sign your
Name and Address!

FOR
NEW
PRODUCTS

New Literature

335. Auto Equipment

John Bean Div., Food Machinery & Chemical Corp.: Descriptions of the company's automotive equipment and accessories are offered in four folders and catalog inserts. Catalog L-1615 covers wheel aligning, balancing accessories and supplies; L-1610 contains specifications of the company's steam cleaning equipment; L-1611 outlines both liquid detergents and compounds for steam cleaning. A roll hammer is introduced with insert L-1617, designed to remove or replace hub caps and install glass or trim.

336. Ignition Catalogs

P & D Mfg. Company: In an expanded promotion and advertising campaign, six ignition parts catalogs have been issued and a book published—"Causes and Cures of Ignition Troubles." The catalogs describe parts for automobiles, trucks, buses and taxis; also marine engines, small engines and magnetos, industrial engines and farm tractors. Another feature is a unit breakdown of distributors, generators and starters.

337. Body Repair

Black & Decker Mfg. Company: Recently published a

handbook of the latest improvements of auto body repair. The 22-page booklet (Modern Auto Body Repairing) describes the new Resin method, as well as the familiar method using metal solder. A new belt sander is announced which allegedly collects 90 per cent of annoying fine dust.

338. Battery Catalog

Fox Products Company: Offers an 8-page catalog describing its line of battery selling and servicing equipment. Specifications cover the new Superchargers, which charge up to 24 volt batteries. These models have attractive chrome front panels, selenium or silicon rectifiers and automatic cut-off. The deluxe Powercharger units, with chrome case fronts, are also described. Specifications reportedly meet requirements of both home and large garages. Other information includes the company's battery testers, automatic pulse maintainers and manually-operated battery maintainers.

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Chilton's MOTOR AGE

P. O. Box 102,

Village Station,

New York 14, N. Y.

FIRST CLASS
PERMIT No. 36
New York, N. Y.



Readers Service Dept.

339. Latest Catalog

Refill Filter Company: Recently issued its latest 1958 catalog describing the line of Refilco "Premium-Pack" oil filter replacement cartridges. These are unconditionally guaranteed for 5000 miles, or its hourly equivalent. The line offers cartridges for 1958 automobiles, buses, trucks and taxis; also gas or diesel engines. Three filters — sock, can, or micron—are available. A cross reference chart of dimensions, other specifications identifies various filter models. A supplementary catalog describes lube and fuel oil filter cartridges for construction, farm, marine and industrial fields.

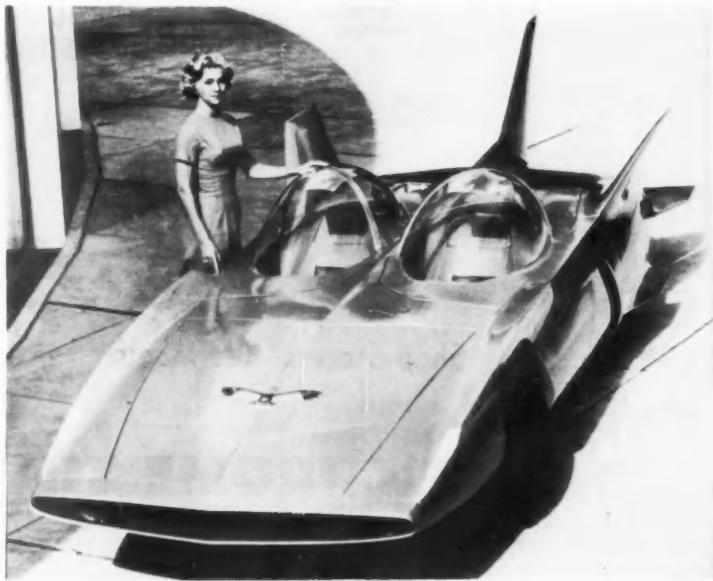
(Continued on page 103)

GM's Firebird III Features

Single Stick Control System

Interesting factor of Unicontrol system is elimination of conventional steering wheel, brake pedal, and accelerator

Girl at right stands by new Experimental Firebird III. Car is gas turbine powered.



A NEW experimental Firebird has been built and successfully tested, reports General Motors. Firebird III is designed around a single stick control system—Unicontrol. This system eliminates the conventional steering wheel, brake pedal, and accelerator.

The car is a two-passenger, gas turbine powered model. Tools of the "space age"—electronics, transistors, and computers—are used to guide the car automatically. Also to control passenger comfort.

First public display of Firebird III will be at the GM Motorama of 1959. It opens Oct. 16 in New York City. The Motorama next moves to Boston and a Nov. 8 opening.

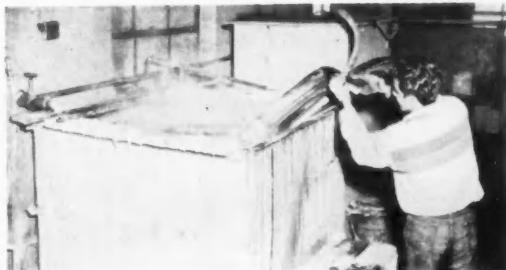
Firebird III has an aerodynamic Fiberglas body; is pearlescent silver-gold in color. It has a wide, tapered nose, twin plastic bubble canopies over the passengers and seven fins clustered around the rear of the body.

The car's most significant single feature, its control system, features combined and improved versions of "no-hands" steering and the single-stick Unicontrol.

The wing-shaped Unicontrol handle is mounted atop a four-inch control stick. This is located in the center of the car; operated by either passenger. It combines steering, braking, accelerating, parking functions.

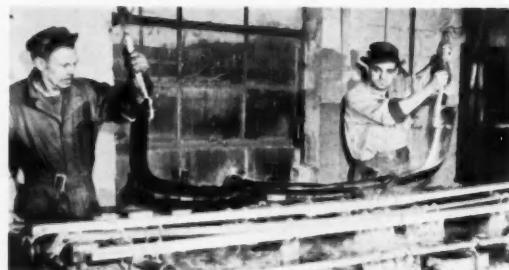
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A bumper is lowered into a stripping tank which contains a strong detergent, or alkaline cleaner.



Dents are removed before sanding. Here, two men use an anvil to remove bumps and smaller dents.

Bumpers are dipped in bright nickel for thirty minutes. Hanging in tank are sword-like anodes.



Body Shop Story of the Month

RE-CHROME THOSE RUSTED BUMPERS!

NUMEROUS electroplating firms in the U.S.A. have found it profitable to convert or enlarge their facilities to include automobile bumper plating. One of such companies is the Standard Bumper Plating Company, Jersey City, N.J.

Although the firm still handles production work such as hardware, fittings, etc. as well as custom jobs, the chromium plating of bumpers is becoming a more important part of their operation.

Owner Joseph Yacco states that the aver-

age rechromed bumper costs about one-half of the manufacturer's new price.

Many repair shops and dealers over a wide area send in rusted or damaged bumpers for repair and replating. In case of rush orders or bumpers that require more work than usual, delivery is made immediately from a stock of over 2,000 bumpers that are already plated.

About the most expensive items in the chromium plating shop are the rectifiers, these are used to convert the incoming alter-



A five minute dip in heated chromium-acid-sulphate produces a bright chromium coating of .001-in.

Arc welding is used to repair cracked or torn bumpers. Note hydraulic straightening press.



This Jersey City electro-plating firm has found it profitable to rechrome corroded and damaged bumpers

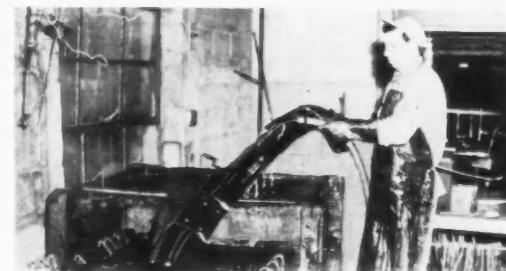
nating current to DC for the various plating tanks. The tanks themselves are usually custom-made according to the capacities desired. Standard's tanks range from 850- to 1,500-gallon capacity.

An important point to remember: When producing high-quality chromium plating, (aside from careful strip-cleaning, straightening and disc-sanding,) have the right ratio of copper and nickel anodes in the copper and nickel plating tanks. The copper anodes are made up of actual copper balls. About



Prior to nickel plating, the bumper is lifted from the copper-dip tank and buffed to a high lustre.

Dull, brownish coating is removed with a water rinse, revealing the bright, chromium plating.



the size of tennis balls. Hung in the solution by means of metallic baskets. The nickel anodes have a sword-like shape and hang in the nickel plating tank. Technically what occurs in the electroplating process is this: The heavy electrical current flow between anode and cathode (the bumper is this case) causes the slow disintegration of the anodes. The minute disintegrated metallic particles are carried through the solution; deposited on the part being plated. When worn down too much, the anodes must be replaced. This maintains the right amount of anode surface within the solution.

The sequence of steps in Standard's chromium plating operation is as follows:

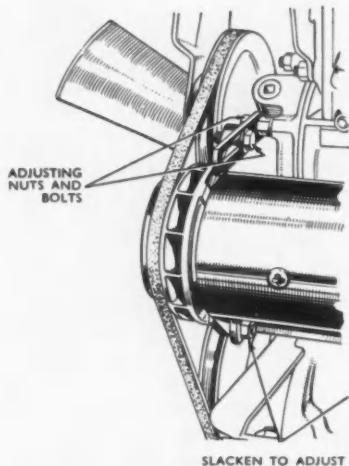
Bumpers are immersed in a stripping (degreasing) tank. Tank contains an alkaline cleaner such as Oakite. Once cleaned, they go to the straightening department to remove bends, dents. If needed, welding will be done to repair cracks. All rust and old chrome are then removed by disc-sanding.

The first plating operation consists of a 1-hour dip in the copper plating tank con-

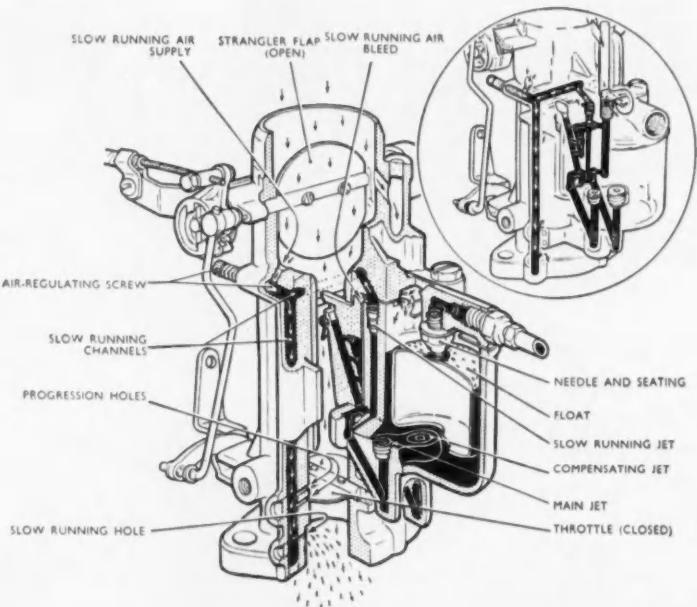
(Continued on page 99)

Servicing the Hillman Minx

A round-up of correct repair procedure adjustments is presented for properly servicing the Hillman Minx



Fan belt is adjusted by moving generator outward.



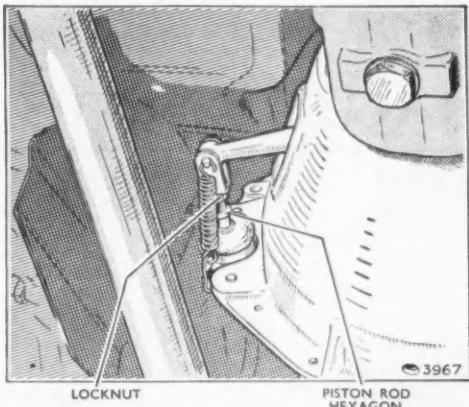
Cutaway of the carburetor circuits is shown above.

ONE of the popular small cars riding American highways in greater numbers is the sleek-looking Hillman Minx. Service of this car is highlighted in the following round-up of adjustments and repair procedures.

How to adjust the brakes: Remember first that the brakes are hydraulic (Lockheed). The handbrake, on the other hand, is mechanically operated. Thus it is independent of the hydraulic system. The handbrake oper-

ates on the rear brake through a cable and linkage.

To adjust the front hydraulic brakes, remove the hubcap and the little cover from one front wheel. Turn the wheel so that the hole in the roadwheel and the brakedrum is opposite the slotted head of one of the adjusters. Using a screw driver, turn the adjuster in a clockwise direction until the brake shoe is in contact with the brake drum. Then turn the adjuster anti-clockwise one



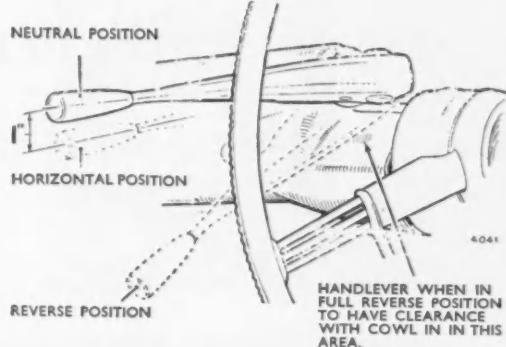
Adjust piston rod for correct pedal clearance.

notch. This should provide a correct clearance between the shoe and the drum. If closer adjustment is required, spin the wheel and drum and apply the brake hard. This will correct the position of the shoe after which a further adjustment check should be carried out. Now turn the wheel approximately 180 degrees and repeat the operation on the second adjuster. There are two adjustments on each front wheel. They both are adjusted in the same manner.

Adjusting Rear Brakes

Remove hubcap and jack up one rear wheel until it is free to rotate. Turn the wheel so that the hole in the wheel and the brake drum is opposite the slotted head of the adjuster. Using a screw driver turn the adjuster in a clockwise direction until the brake shoes are in contact with the brake drum. Apply the foot-brake hard to insure that the wheel cylinder is centralized and release the brakes. If, after doing this, the wheel is still locked, turn back the adjuster one notch or if necessary two notches to provide the correct clearance between the shoes and the drum. There is only one brake adjustment on each rear wheel.

To remove shoes, jack up the vehicle and remove hubcaps. Slacken all brake adjusting screws anti-clockwise to full extent. Remove the brake springs from one shoe by means of a screw driver. Then remove both shoes. When assembling, assemble the top pull-off spring to the shoes, taking care to locate the

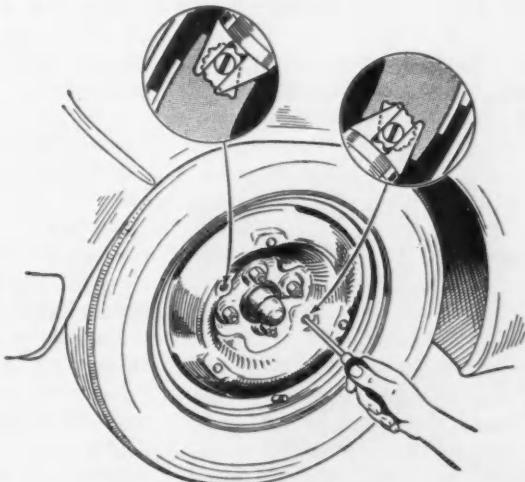


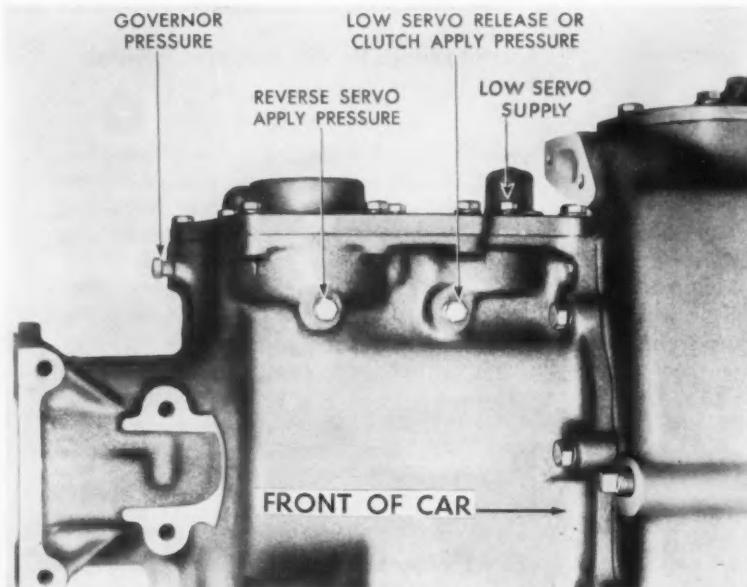
Correct position for shift lever when adjusted.

ends and correct drillings in the shoes. The ends of the springs must be located in the holes nearest the end of the shoe. Note also that the spring must run underneath the brake shoe webs. Position the top ends of the shoes against the ends of the wheel cylinder. Assemble the bottom pull-back spring to shoes in the same manner as the top one. Pull the bottom ends of the shoes apart and locate them either in the slots on the abutment of the rear wheels or the bottom of the

(Continued on page 93)

Holes are provided in wheel and brake drum for correctly adjusting the car's brakes.





Powerglide—Where To Test Rear Pump

'53 Chevrolet Powerglide Shifts Down When Hot

I have a 1953 Powerglide Chevrolet with transmission trouble. Two mechanics completely tore it down, but have not been able to find anything wrong with it. It works fine, has good up-shift and also down-shift until unit starts to warm up. Then it works OK until the accelerator is eased up on. Then it will shift down to low range at any speed, even at 70 mph. As long as the accelerator is depressed it will stay in high

range. What do you think is causing this problem?

Don Hollister
Home Service Station
Deadwood, S. Dak.

SINCE this condition occurs only when the transmission is warm, the trouble is probably due to a defective rear oil pump. When you take your foot off the throttle, it depends on the rear pump for pressure to the governor. I would suggest borrowing a set of gauges to test the rear pump. With the car on

jacks, start the engine. Place shift lever in drive and rev. up to 30 mph. Gauge should read 50-75 lbs. In low gear, pressure should be 140-180 lbs.

Wants To Know What Kind Of Pistons To Put In Tractor

I have a Minneapolis Moline G tractor using L P gas. I have installed $\frac{1}{8}$ inch over-sized pistons to give it $4\frac{3}{4}$ bore and 6 inch stroke. The pistons have the raised heads. They are supposed to raise the compression .4 of 1 point. However, I am not pleased with the performance I am getting. I would like to know if flat ones would be better. If the motor is so designed, perhaps I could get better results out of dished pistons. I know I would have to raise the compression with dished ones. I now have GE 70 M heads on it.

Gene Foss
West Brooklyn, Ill.

YOUR tractor should definitely run better with the dome pistons than with the flat ones. To get the most out of this engine, I would suggest going over the valve and electrical system carefully. Grind the valves and clean out the ports, removing all the rough spots. Then I would experiment with various settings on the ignition timing.

for troubleshooting

Ford Truck Is Hard To Start

One of my customer's trucks, a 1955 Ford Model F700 V-8 3 ton chassis, is giving me a headache. When engine is cold, it will start right up. When it gets hot, it nearly runs the battery dead before it finally starts. Yet when it is given a push, away it goes. I put in new points and replaced condenser plugs and carburetor. I even replaced the fuel pump with an electric pump, figuring the possibility of a vapor lock condition. The starter and battery have also been replaced. The truck has about 35,000 miles up until now. This problem is really getting me down. What do you suggest?

Irving Marcus
Wayside Inn Garage
Ellenville, N.Y.

USUALLY when a condition like yours exists, it is due to either the starter drawing too much current or a faulty coil ignition switch or loose wires. I would suggest first checking all the electrical connections or trying a new coil. One of these items should eliminate your troubles.

1949 Olds Is Using Oil

We have a 1949 Oldsmobile convertible, model 76, that is hard on oil. It is necessary to add a quart every 125-150 miles, as the pressure begins to drop and fluctuate after this distance. The car does not seem to be burning any oil as there is an equal compression reading in each cylinder. There is also an absence of the tell-tale blue smoke upon descending steep grades and on rapid acceleration. Rings and valves are all OK. To try to correct this condition we have installed new pan and valve cover gaskets and have replaced the rear main bearing oil seal. The oil seems to be quite clear and free from any diluting agent such as water and gasoline. Ever since replacing these gaskets (pan and valve covers), the car has refused to

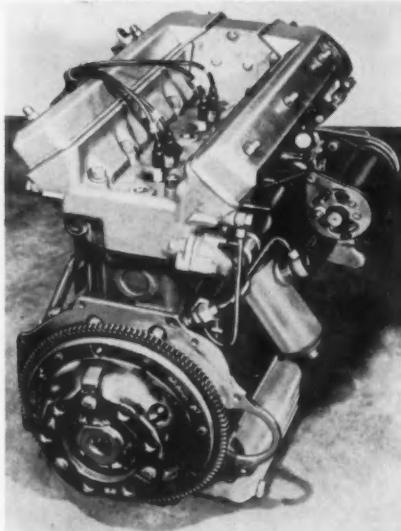
leak even a bit of oil as it had done before this.

Ted L. Gibson
Bernardston, Mass.

OIL either escapes from an engine through external leaks or it goes up into the combustion chamber and is burned up. Sometimes oil is lost due to faulty crankcase ventilation. Make sure the ventilator in the valve cover is clean. Loss of oil by the ventilation route is usually a sign of poor rings. The combustion gases blow into the crankcase which sets up pressure in the crankcase and blows oil out of the breather pipes. I would suggest checking the automatic choke and the fuel pump, gasoline may be getting into the oil causing dilution. Try using a different brand of oil.



New MGA "Twin Cam": A powerful mate for the standard model of the MGA.



This twin overhead camshaft engine develops a speed exceeding 120 mph.

JOINING its popular predecessor, a new and powerful MGA model is available with a twin overhead camshaft engine, disk brakes and a top speed in excess of 120 m.p.h. The new sports model ("Twin Cam") will not replace the current MGA, whose sales have reached a favorable high.

The rakish sports car is offered in the traditional open two-seater version, or as an enclosed coupe. Disk brakes, which have achieved success on racing models, and knock-on disk wheels are standard equipment.

Produced by the British Motor Company,

Powerful MGA Model Makes Debut

New BMC car offers disk brakes and swift acceleration rate

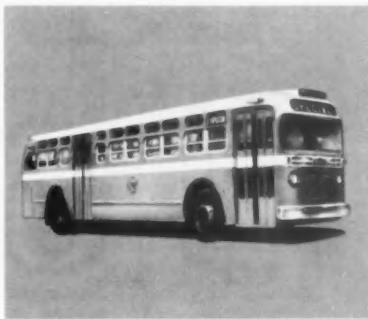
the new MGA is reportedly capable of accelerating from 0 to 110 m.p.h. in an astonishing 38 seconds. A supercharged, experimental version was raced to 245 m.p.h. last year by Sterling Moss on the Bonneville Salt Flats.

The "Twin Cam" MGA is powered with a four cylinder, twin overhead camshaft engine, delivering 107 b.h.p. at 6500 r.p.m. Compression ratio is rated at 9.9 to 1. The engine, developed from BMC's "B" series unit, has been increased to 96.9 cu. in. Bore and stroke are 2.9 and 3.5-in. respectively.

(Continued on page 99)



High-gloss DULUX® colors make cars look new ... trouble free performance speeds the job



DURABILITY that keeps customers pleased—proved by the use of "Dulux" on leading bus fleets throughout the country.

New-car gloss and beauty are just what you expect of Du Pont "Dulux" Enamel because it's so widely used in new-car production. It gives over-all jobs buy appeal . . . panel repairs that match the original in color and luster . . . easy-working qualities that make it as economical in your shop as on the production line:

EASY SPRAYING—"Dulux" quickly flows out to a full rich coat. **FAST HIDING**—the high solids in "Dulux" produce higher build; sandpaper scratches don't show through. **QUICK DRYING**—"Dulux" delivers all the speed possible in a finish that is so *brilliant* and so *durable*. Get it from your Du Pont jobber.

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chemically engineered to do the job better



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

CURRENT PASSENGER CAR PRICE, WEIGHT AND BODY TABLE

Following are prices at factory for cars with standard equipment as of August 14, 1958
State or local taxes, transportation and finance charges and optional equipment are extra.

BODY MAKE AND MODEL	Last Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Suggested Price at Factory including Federal Taxes	Shipping Weight	BODY MAKE AND MODEL	Last Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Suggested Price at Factory including Federal Taxes	Shipping Weight	BODY MAKE AND MODEL	Last Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Suggested Price at Factory including Federal Taxes	Shipping Weight
AMERICAN MOTORS CORP.														
RAMBLER					DODGE, Cont'd					FORD MOTOR CO. cont'd				
American					Regal, V8					CADILLAC, Cont'd				
DeL. Sedan, 2d.	1631		2463		Lancer, 2d.	2966	234	3200		Imperial	7950	725	8675	5425
Sup. Sedan, 2d.	1710		2475		Sta. Wagons					Deiray V8				
De Luxe 6					Suburban, 2d.	2715	215	2930	3875	Utility Sed., 2d.	1924	196	2120	3356
Sedan, 4d.	1875	172	2047	2947	Sierra, 2s.	2775	220	2995	3930	Sedan, 2d.	2005	203	2208	3399
Super 6					Sierra, 3s.	2907	230	3137	3990	Sedan, 4d.	2055	207	2262	3442
Sedan, 4d.	2028	184	2212	2960	Cus. Sierra, 2s.	2940	232	3172	3955	Country Squire	2663	213	2876	3696
H. T. Sedan, 4d.	2098	189	2287	2983	Cus. Sierra, 3s.	3072	242	3314	4035	Thunderbird				
Sta. Wagon, 4d.	2302	204	2500	3069					Tudor	3330		3708		
Custom 6									Convertible					
Sedan, 4d.	2135	192	2327	2968	IMPERIAL					Sta. Wagon, 2d.	2344	230	2574	3743
Sta. Wagon, 4d.	2409	212	2621	3079	Imperial					Sta. Wagon, 4d.				
Rebel, Sup. V8					Southamp., 2d.	4417	347	4764	4640	Biscayne V8				
Sedan, 4d.	2149	193	2342	3300	Southamp., 4d.	4516	354	4870	4795	Sedan, 2d.	2131	212	2343	3407
Sta. Wagon, 4d.	2423	213	2636	3410	Crown	4516	354	4870	4590	Sedan, 4d.	2161	216	2387	3450
Rebel, Cus. V8					Southamp., 2d.	4928	385	5313	4730	Hardtop, 2d.	4415		4735	
Sedan, 4d.	2256	201	2457	3313	Southamp., 4d.	5155	402	5557	4915	Sedan, 4d.	4553		4810	
H. T. Sedan, 4d.	2236	206	2532	3328	Sedan, 4d.	5155	402	5557	4755	Hardtop, 4d.	4553		4820	
Sta. Wagon, 4d.	2530	221	2751	3418	Le Baron	5273	411	5684	4820	Hardtop, 2d.	4894		4880	
Amb. Sup. V8					Conv. Coupe					Sedan, 4d.	5124		4880	
Sedan, 4d.	2369	218	2587	3456	Sedan, 4d.	5468	426	5894	4780	Hardtop, 2d.	5124		4885	
Sta. Wagon, 4d.	2643	238	2881	3544	Sedan, 4d.	5468	426	5894	4940	Coupe, 2d.	5367		4885	
Amb. Cus. V8					Limousine	14019	981	15000	5960	Hardtop, 4d.	5597		4865	
Sedan, 4d.	2504	228	2732	3462					Convertible	5792		5040		
H. T. Sedan, 4d.	2588	234	2822	3475	PLYMOUTH*									
Sta. Wagon, 4d.	2778	248	3026	3568	Plaza V8	1943	158	2101	3320	MERCURY				
H. T. St. Wag., 4d.	2862	254	3115	3566	Bus. Coupe	2026	164	2190	3315	Monterey				
CHRYSLER CORP.														
CHRYSLER														
Windsor					Club Sedan	2074	168	2242	3415	Sedan, 2d.	2422		4030	
Sedan, 4d.	2640	225	3074	3895	Savvy V8					Sedan, 4d.	2487		4160	
Hardtop, 2d.	2628	231	3159	3860	Club Sedan	2153	174	2327	3360	Hardtop, 2d.	2532		4075	
Hardtop, 4d.	2698	236	3224	3915	Sedan, 4d.	2200	178	2378	3400	Hardtop, 4d.	2598		4150	
Twn. & Ctry., 2s.	3302	259	3561	4155	Sport Coupe	2222	178	2480	3400	Convertible	2622		4225	
Twn. & Ctry., 3s.	3478	274	3748	4245	Suburban V8	2268	184	2472	3475	Montclair				
Saratoga					Delux. Sed.	2278	183	2461	3370	Super 88				
Sedan, 4d.	3485	273	3758	4120	Club Sedan	2325	187	2512	3430	Hardtop, 2d.	3011		4015	
Hardtop, 2d.	3541	277	3818	4045	Sedan, 4d.	2341	188	2529	3410	Hardtop, 4d.	3086		4165	
Hardtop, 4d.	3613	282	3895	4145	Sport Sedan	2407	193	2600	3520	Conv. Coupe	3210		4150	
New Yorker					Conv. Coupe	2525	202	2727	3545	Century 60	3284		4295	
Sedan, 4d.	3823	307	4230	4195	Suburban, 2d.	2318	188	2504	3645	Conv. Coupe	3284		4230	
Hardtop, 2d.	3871	311	4282	4205	Delux. 2d.	2368	190	2558	3740	Hardtop, 2d.	3555		4260	
Hardtop, 4d.	4024	315	4339	4240	Custom, 2d.	2431	195	2626	3690	Hardtop, 4d.	3626		4390	
Conv. Coupe	4356	340	4696	4350	Cust., 4d. 6 p.	2481	199	2680	3755	Conv. Coupe	3696		4395	
Twn. & Ctry., 2s.	4456	347	4803	4445	Cust., 4d. 9 p.	2611	209	2820	3840	Century 60	3746		4405	
Twn. & Ctry., 3s.	4656	362	5018	4445	Sport., 4d. 6 p.	2623	210	2833	3745	Conv. Coupe	3746		4405	
300D					Sport., 4d. 9 p.	2753	220	2973	3830	Voyager, 2d. 6p.	3243		4435	
Hardtop, 2d.	4740	368	5108	4305	Fury V8	2808	224	3032	3510	Voyager, 4d. 6p.	3336		4525	
Conv. Coupe	5140	398	5538	4745	Sport Coupe	2808	224	3032	3510	Col. Pk., 4d. 6p.	3466		4540	
FORD MOTOR CO.														
GENERAL MOTORS CORP.														
BUICK														
PONTIAC														
PACKARD														
STUDEBAKER CORP.														
CONCORDE 6														
Club Sedan	2235	179	2414	3360	FORD*					BUICK				
Sedan, 4d.	2310	185	2495	3410	Custom V8	1923	156	2079	3283	Special 40				
Lancer, 2d.	2349	167	2536		Tudor	2004	163	2167	3306	Sedan, 2d.	2358		4063	
Coronet V8					Tudor Sedan	2054	167	2221	3334	Sedan, 4d.	2448		4116	
Club Sedan	2335	186	2521	3805	Fordor Sedan	2147	173	2320	3431	Hardtop, 2d.	2489		4058	
Sedan, 4d.	2410	192	2603	3555	Fairlane V8	2197	177	2374	3483	Hardtop, 4d.	2560		4180	
Lancer, 2d.	2449	195	2644	3540	Club Sedan	2271	182	2453	3429	Conv. Coupe	2766		4165	
Conv. Coupe	2693	214	2907	3725	Town Sedan	2322	185	2517	3506	Estate Sedan	2862		4396	
Custom V8					Town Victoria	2332	185	2517	3506	Conv. Coupe	2974		4408	
Sedan, 4d.	2554	203	2757	3570	Town Victoria	2332	185	2517	3506	Century 60	3007		4241	
Lancer, 2d.	2607	207	2814	3565	Fairlane 500	2332	185	2517	3506	Hardtop, 2d.	3056		4267	
Lancer, 4d.	2664	211	2875	3640	Club Sedan	2289	184	2473	3454	Hardtop, 4d.	3119		4311	
Cus. Roy. V8					Town Sedan	2339	188	2527	3256	Roadmaster 75	3168		4300	
Sedan, 4d.	2768	219	2985	3640	Club Victoria	2345	189	2534	3464	Hardtop, 2d.	3219		4568	
Lancer, 2d.	2804	222	3026	3610	Club Victoria	2405	183	2598	3561	Hardtop, 4d.	3252		4668	
Lancer, 4d.	2870	227	3097	3670	Sunliner	2546	203	2749	3630	Conv. Coupe	3271		4676	
Convertible	3015	236	3253	3785	Skyliner	2907	231	3138	4069	Hardtop, 2d.	3271		4691	

* Prices of 8 cyl. models are \$137 less than 8 cyl. models for the Custom; \$124 for the Fairlanes and \$107 for the Station Wagons.

* Prices of 6 cyl. models are \$100 less than 8 cyl. models.



New 3M Adhesives Kit makes any man in your shop a Dust-Water Leak Expert!

HERE FOR THE FIRST TIME is a complete dust and water leak center in handy kit form! It has everything you need to detect and correct water and dust leaks in any make or model car:

Four 7½ oz. cans 3M Windshield Sealer
Four 7½ oz. cans 3M Trim Adhesive

Applicator Gun with spreader and needle tips

Four 5 oz. tubes 3M Super Weatherstrip Adhesive
Two boxes "SCOTCH-CALK" calking compound

"SCOTCH" BRAND No. 217 Door Sealing Tape

20 ft. roll "SCOTCH" BRAND No. 33 Plastic Tape

PLUS the new 3M Dust & Water Leak Manual to instruct your shop personnel on water leak detection and correction.

PLUS a handy new Wall Chart that provides a quick visual guide to quick, efficient leak repair.

CUT DOWN on time spent locating leaks . . . these handy guides help you spot the trouble instantly!

SPEED UP repairs with this all-in-one kit that puts adhesives, sealers, tapes, calks and applicators right in your hands!



NEW!

Four-tube supply of 3M Super Weatherstrip Adhesive
now in handy tray-pack . . . easier to handle—store—
identify!

LOOK FOR THE 3M DUST-WATER LEAK REPAIR KIT IN ITS BRAND NEW DRESS!

SPECIAL "DEAL" PRICE \$20.95

Regular Price \$23.32

Economy Dust-Water Leak Repair Kit. The ideal kit for smaller shops

Four 5 oz. tubes 3M Windshield Sealer

"Deal" Price \$10.50

Four 5 oz. tubes 3M Super Weatherstrip Adhesive

Regular Price \$12.24

Four 5 oz. tubes 3M Trim Adhesive

(all in handy tray-packs)

SEE YOUR SUPPLIER RIGHT AWAY . . . OFFER LIMITED!

3M Automotive Products

"SCOTCH" AND "SCOTCH-CALK" ARE REGISTERED TRADEMARKS OF 3M CO., ST. PAUL, MINN., U.S.A. 40 PARK AVENUE, NEW YORK 10, CANADA, LONDON, ENGLAND.

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"Our advertising in the Yellow Pages brings in most of our new business."

says **DELTON H. NORTON**
TOPEKA MOTOR EXCHANGE, Topeka, Kansas

"When we ask new customers how they found us, eight out of ten say 'through the Yellow Pages.' Many even quote the guarantee mentioned in our advertising. It's this kind of response that has sold us on the Yellow Pages as the best place for our selling message. In fact, we advertise nowhere else!"

Advertising in the Yellow Pages reaches most prospects in your business area...at the very time your services are needed. Ask the Directory representative to help you plan a profitable program in the Yellow Pages. Call him at your local telephone business office today.

MOTORS & TRANSMISSIONS EXCHANGED



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FL 7-0316
LARGE STOCK
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Plan
One Day Service
If Necessary
D. H. Norton - Owner

12,000 MILES OR 90 DAY
GUARANTEE!

TOW IN SERVICE
TUNE-UP
INSPECTION
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ALL MAKES



PHONE
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EASY PAYMENT
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GUARANTEED!

A LARGE STOCK
ALL KINDS OF
AUTOMATIC & STANDARD
TRANSMISSIONS

ALL MODELS

Topeka Motor Exchange
506 508 QUINCY

MANY CUSTOMERS quote the guarantee in this $\frac{1}{2}$ page advertisement (shown reduced). This ad, plus an "Auto Motors" listing, brings in business for Topeka Motor Exchange.

Shop of The Month . .

Continued from page 43

work is needed. All work positions have overhead lighting. Each tune-up mechanic has a roll-away cabinet with almost everything he needs. He can move to any position in the shop and work. These are in addition to the regular bench positions.

"With business conditions as they are we expect an increase in repair work rather than in new car servicing," Lew Goff said. "We figure that repair work increases boost our gross by at least 25 per cent."

Jimmie Goff reported that "people today are shopping for automotive work. They are not so much interested in price as in being assured of good work for which they are paying. This fits in nicely with our policy of maintaining quality in our work."

Goff's is located on Northwest 36th Street, a major traffic thoroughfare. It is convenient to many of the commercial accounts.

The shop space has been more than doubled since the Goffs began business about five years ago. Most of the services are about the same as when the firm started—"you have to offer just about every type of service," Lew Goff said—but have been expanded.

New services added since the opening of the operation were paint and body shop, which were put in an addition to the rear of the original building; radiator work, which originally was "farmed out," but this was found to be unsatisfactory; air conditioning installation and servicing.

The average bill at Goff's is around \$20. About 40 per cent of the firm's gross is carried on 30-day charge accounts, chiefly to commercial customers. About 10 per cent of the gross is financed, to individuals.

SERVICE SUGGESTIONS

Correcting Grounding of High Tension Wires

Grounding of the high tension wires in Mercurys and Lincolns may exist between the air cleaner and heater hose elbow.

Follow Procedure:

The following procedure should be used to correct this grounding condition:

1. Remove ignition coil and bracket.
2. Reverse coil in bracket and re-install head.
3. Remove heater hose clamp and discard. (This clamp is located near the carburetor choke.) The removal of the hose clamp will permit the hose to lay close to the intake manifold and provide more clearance for the spark plug wires.
4. Reroute the heater return hose under the distributor vacuum tubing.
5. Carefully route spark plug wires to the front of the inlet hose and elbow connections. The Corbin heater clamp will retain the wires in this position.

Two Types Of Valve Lifters & Push Rods In '57 Cadillacs

A newly designed hydraulic valve lifter has been in use on all 1957 Cadillac cars, beginning with Engine No. 042804. The new lifter uses a body of two-piece construction and has a modified push rod seat. This reduces the possibility of the plunger cup tipping. The lifter requires the use of a redesigned push rod. The new parts are easily distinguished from those used in earlier cars. The lifter

by the wide relieved section around the circumference in which there is only one oil feed hole. The push rod by the absence of identification grooves at the ends.

The push rod is now designed so that either end may be inserted into the lifter cup at assembly. The new rod is .187" shorter, to allow for the higher plunger cup in the new valve lifter.

Under no circumstances should new and old lifter and push rods be used in combination with each other. The new lifter and new push rods must be used as a matched set. Failure to do so will result in severe damage to the engine.

Diagnosing And Eliminating DeSoto Brake Noises

The following information will be helpful in diagnosing and eliminating brake noise complaints encountered on DeSoto's total contact brakes. One complaint, usually confined to the rear brake, is a howl or groaning noise. Another, may be a squealing or higher pitched noise coming from either the front or rear brakes.

Road Test Car

The first important step, to elimination of this complaint, is to road test the car. This will establish the origin of the noise. Then proceed as follows: Check to make sure the axle housing to the spring U bolt nuts are torqued from 62 to 69 foot pounds on S-27 models and 70 foot pounds on S-25 and S-26 models. Spring shackles should be torqued from 35 to 40 foot pounds on all models. Front and

rear brake support plates should be torqued to 55 foot pounds to prevent the possibility of vibration. Check for proper brake shoe adjustment. The drum damper springs, which are standard front and rear on S-25 and S-26 models, but only on the front on the S-27 models, should fit tightly.

A weak or loose spring will not dampen out any noise. Pull the wheel and check the braking surface of the drum for a glazed substance, burned spots, roughness, flat spots or a threading design.

If any of these conditions are found, place the drum on a lathe or brake grinder. Polish the drum. Use 60 or 80 grit emery cloth to start. Finish up with No. 200 or finer emery cloth. Note: Drums should be checked for out-of-roundness before polishing. Beyond .004 inch, they are to be turned down but not to exceed .030 inch on the diameter.

If the brake drum is cracked, it must be replaced.

When To Drain Plymouth Automatic Transmission

The drain period for Plymouths under average conditions for the automatic transmission is every 20,000 miles.

Certain types of service, subject the fluids to more severe operating conditions. Change interval for transmissions subjected to these conditions should be reduced to 10,000 miles. Automatic transmissions should be drained and refilled with automatic transmission fluid type A for both the 10,000 and 20,000 mile interval.

BODY SHOP TIPS

How To Prevent Paint From Clogging Up Sanding Disk

I have had a good deal of trouble with lacquer paint clogging up my sanding disk. It makes them unfit for further use. I have found a way to avoid this by using the following method. Where it is possible to use, take the welding torch with a leading tip on the end. Heat the lacquer point in the area to be sanded, until it blisters and turns dark. It can then be ground off easily, with no clogging of the sanding disk. *Aubrey Whitesell, Rt. #1, 1005 Sherwood Ave., Waynesboro, Va.*

How To Make Hydraulic Door Glass Lifters Work

On some hydraulic door glass lifters, a small amount of oil sometimes seeps past the piston and lays on the top of the piston. This prevents the piston & rod from raising the glass all the way up. Drill a small hole at the top of the cylinder. When you raise the glass the excess oil will shoot out and allow the glass to go all the way up. *Hank Sheets, Sheets Auto Service, 2428 Mahoning Ave., Youngstown, Ohio.*

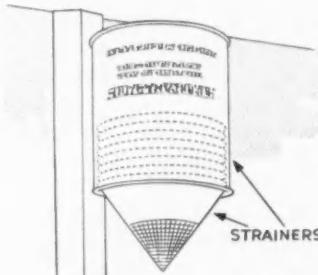
Tip On Putting Out Fires Started By Welding

Here is a tip for body mechanics which I have put to use quite frequently. Many times

while welding, small fires are started in body deadener and under seal in inaccessible places. These fires can easily be blown out by turning off the acetylene and opening the oxygen. The welding tip can direct the pressure of the oxygen thru any small opening. *William Smith, Smith Auto Rebuild, 205 Liberty St., Lynden, Wash.*

Paint Pail Makes Handy Paint Strainer Dispenser

As a regular reader of Motor Age, I especially enjoy the Body



Shop Tips each month. I thought perhaps your readers might be interested in an idea of my own. It is a paint strainer dispenser, made from an empty one gallon paint pail and turned upside down. The opening is just small enough to hold the strainers in and yet allows easy insertion and removal. Just fasten the pail on the wall in any convenient location and you are in business. *Ralph Netley, 479 S. Julian St., Naperville, Ill.*

Way To Replace Hood Hinges On '52 Mercurys & Fords

I have a way to replace hood hinges on '52 Mercury and Ford cars that will cut time in half. First remove splash pan which is bolted to fender. Then cut inside fender skirt at first groove with metal cutter. Bend skirt out of the way and you can get at the hinge bolts. Now install new hinge and bend skirt back into shape. Spot weld, undercoat, replace splash pan to fender and job is finished. *E. James Newcomer, Service Manager, Ellis Automotive Service, 1045-1065 E. Princess St., York, Pa.*

Getting The Last Drop Out of Dispensing Tubes

In most paint shops a good many items used are dispensed from tubes. When not carefully squeezed out, there is considerable waste. Tubes can be squeezed flat by running them part way through a washer wringer. It keeps the tubes in better condition for use on the next job. *Harold L. Slates, Body Shop Foreman, Tom Hamilton & Son, Dodge & Plymouth, Concordia, Kansas.*

BODY SHOP TIPS

are worth

\$7.50

If you've developed an idea that has helped you to do body and fender work or painting better or faster, it may be worth money. Jot down the idea and, if necessary, make a rough sketch. Sometimes a snapshot will help. Just make the description of your BODY SHOP TIP clear, and if it is used, you'll receive a check for \$7.50.

Sports Page

Continued from page 35

to Seton Hall but first I should go out and play with Newport, Ark. If that was the way it was, why, yes sir, Mr. MacPhail. I played two weeks out there, broke my finger, came home and entered Seton Hall.

"I didn't tell anybody I was a pro. I played basketball two years. During vacation I was playing in New England in one of those summer college leagues and I had a great day—home run, double, four for four. Who was in the stands but the Yankee scout, Paul Krichell. 'I'm sorry, Mr. Krichell,' I told him, 'but my father told me I mustn't even talk to a scout till I'm out of school. I promised.' Hell, my father didn't know I was playing ball.

"The next winter, though, the Dodgers had me on the Johnstown, Pa., roster and they hadn't protected me. Krich spotted me on the draft list—Kevin Joseph Connors, six feet, five and a half, first baseman, lefthanded batter. So the Yankees drafted me and sent me to Norfolk."

Four years later after his Army hitch, Connors was reclaimed by the Dodgers on waivers from the Yankees' Newark farm. (Aching to play for Brooklyn, Chuck had been prodding Branch Rickey, Jr., by mail.) In 1951 he was sold to the Cubs and he wound up with the Los Angeles Angels.

Tomorrow's .400 Hitter

"I was hitting .321 out there," he said, "with twenty-three home runs, and corning it up. I'd hit one out, turn cartwheels to second base, slide into third. A director saw me and said he had a part in a picture called *Pat and Mike*.' A movie actor. That'd be something I could write to Brooklyn about. They gave me \$500 for a day's work. 'Hey,' I thought, 'this isn't a bad dodge.'

"I've been in twenty-one pictures besides television and now I own part of a new TV series called 'The Rifleman,' which means my kids will eat for the next three years. I don't sing and I'm not pretty so I thought, I can play Westerns, and I bought a horse and learned to ride. I learned to shoe the horse and groom him and feed him and I even gave him gas once when he had worms, so I'd be used to horses and feel natural

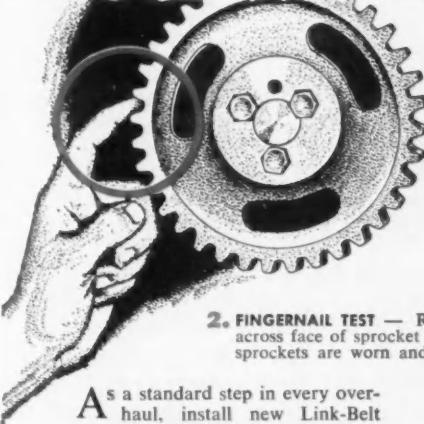
around 'em.

"This 'Big Country' part is the biggest I ever had, and if it does what I hope it will for me, maybe somebody will let me play the story of Ted Williams' life. He must be almost as tall as I am, and we're both lefthand hitters, and I can look like a ball player in a uniform, which most actors can't. And what a life story Williams has! Imagine me, a .400 hitter!"

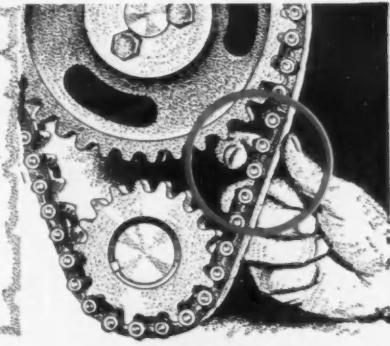
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TIMING TIPS

from LINK-BELT



1. FINGER-GRIP TEST—Remove timing chain cover and crank engine to get all slack on one side of chain. Using thumb and index finger, grip the slack side of the chain midway between the two sprockets. Move chain in and out toward center line of sprockets. More than a $\frac{1}{2}$ -in. lateral movement indicates worn chain.



2. FINGERNAIL TEST—Run your fingernail across face of sprocket teeth. If nail catches, sprockets are worn and should be replaced.

As a standard step in every over-haul, install new Link-Belt timing chain and sprockets. It's easy while the engine is down and may be the difference between a perfect job and one that may cause trouble later.

And don't forget that the service life of a new timing chain is shortened when it is installed over worn sprockets. Install both to prevent early timing lag that results in poor engine economy, burned valves, loss of compression, excessive oil consumption.

Be sure to install Link-Belt timing chain and sprockets — world's finest original equipment line — available in sizes for every engine designed for timing chain.



LINK-BELT
TIMING CHAINS AND SPROCKETS

LINK-BELT COMPANY: 220 S. Belmont Ave., Indianapolis 6, Ind.
Offices in Principal Cities. 14,700

Preview of Chrysler . .

Continued from page 59

(NOW PELLETIZED)

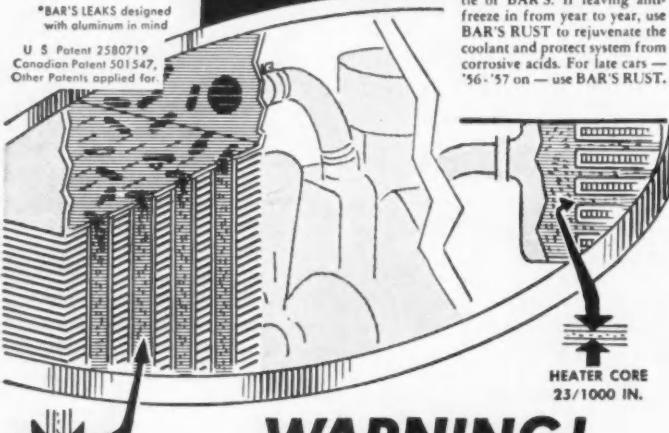
Only BAR'S LEAKS!

MOST WIDELY USED COOLING SYSTEM PROTECTIVE IN THE WORLD

is FINE enough to
Flow through the
newly designed
Cooling System
and Car Heater
tubes (23/1000
to 70/1000 inch)
in modern
cars.

*BAR'S LEAKS designed
with aluminum in mind

U. S. Patent 2580719
Canadian Patent 501347,
Other Patents applied for.



**ON ANTI-FREEZE
CHANGEOVER**

- For top engine performance, use BAR'S LEAKS or its affiliate, BAR'S RUST (same Pat. No.). Flush out and pour in bottle of BAR'S. If leaving anti-freeze in from year to year, use BAR'S RUST to rejuvenate the coolant and protect system from corrosive acids. For late cars — '56-'57 on — use BAR'S RUST.

WARNING!

SERVICE STATIONS — DEALERS

Only BAR'S LEAKS meets the cooling system specifications of every automobile manufacturer as to fineness of ingredients and required protection.

Be on the alert! Many other sealer inhibitors contain coarse, bulky material. They clog the tiny new-car tubes of radiators and car heaters (23/1000 to 70/1000 inch). Fail to circulate. Fail to protect. As a result, aluminum components become pitted, harmful rust and scale develop, and seepage endangers vital metal parts. Remember, if you ruin a car, you're responsible.

Improved BAR'S LEAKS, now pelletized, dissolves to particles 15/1000 inch and smaller. BAR'S LEAKS circulates freely through the smallest heater and radiator cores. Only BAR'S LEAKS provides the required protection — inhibits rust and scale — seals all leaks in gaskets and porous metal. BAR'S is a *MUST!* Write for literature. Tells how you can qualify as a certified cooling system expert.

Cash in on BAR'S for a lucrative repeat business. LIST PRICE \$1.00
Available through automotive jobbers, service stations, auto goods stores.

BAR'S PRODUCTS SUPPLY, INC.
(Office and Plant) P. O. BOX 146 • HOLLY, MICHIGAN

All Chrysler Corporation cars will be finished in a new quality, high gloss enamel. It is claimed that this enamel will retain its gloss for at least 18 months before polishing is required.

Important progress also is recorded in the suspension system. Chrysler now offers an interesting optional equipment air suspension in which air springs, applied only at the rear, are used in conjunction with leaf springs. Low rate leaf springs support most of the weight while the air springs carry the remainder. Thus air springs are employed primarily to provide automatic car leveling.

At the same time some significant improvements are evident in the Torsion-Aire front suspension system. These include: a cam-action adjustment providing an infinitely variable precise setting of caster and camber; new suspension ball joint design having self-sealing characteristics as well as improved lubrication; and a change to shorter and more efficient torsion bars.

For 1959 Chrysler will offer a full line of high performance prestige cars, available as two-door hardtops or convertibles. This includes: Plymouth Sports Fury, powered by the 361-cu. in. V-8 with a four-barrel carburetor; Chrysler 300-E, trimmed in genuine saddle-tan leather, powered with the 413-cu. in. V-8 engine with two, four-barrel carburetors; DeSoto Adventurer, featuring the 383-cu. in. V-8 engine with two, four-barrel carburetors; Dodge D-500 with 383-cu. in. V-8's.

The D-500 engine has a four-barrel carburetor and dual exhaust, while the Super D-500 has the same engine with two, four-barrel carburetor, special camshaft and dual exhaust system.

shop kinks

Time and work saving ideas on cars and trucks can pay off. Send Yours In Now!

\$25

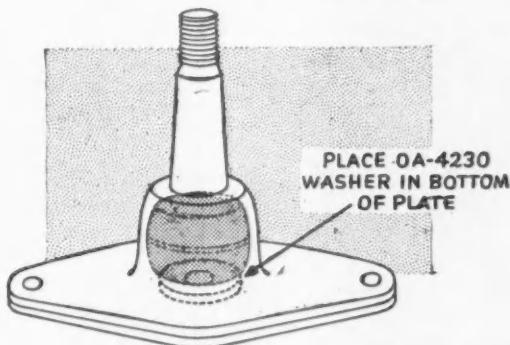
FOR THE KINK
OF THE MONTH

\$7.50

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Sept. Kink of the Month

Ball Joints In '57 Fords Tightened With Washers



When you have complaints about front end vibration of some 1957 Ford passenger cars, check the lower ball joints for looseness. If the ball joint is found to have excessive play in it, do the following: With a chisel, cut the two rivets that hold the bottom plate against the ball. Remove the bottom plate and insert one (#OA 4230) washer. Take the ball part of a ball peen hammer and press the washer to fit the lower plate. Crimp the edges into the four oil grooves to hold it in place. This washer will take all the play out of the joint. Replace the plate by using two $\frac{3}{8}$ by $\frac{3}{4}$ inch long bolts. *Ben F. Robertson, 207 E. Lee St., Hayti, Mo.*

How To Test Magnet Of Electric Automatic Choke

Test the magnetic power of an electric automatic choke by holding a screwdriver close to the magnet's core while someone operates the starter. The powerful magnet should attract the screwdriver. *Harvey Muller, Harvey Muller Auto Service, Box 6, Danboro, Pa.*

Opening Clogged Oil Line Leading to Rocker Arms

I have found an easy way to open the oil feeder line leading to the rocker arms on '53, '54 and '55 Chevrolet six-cylinder engines, when they block up through the head gasket. Remove side, or push rod cover. Remove oil line and install grease fitting. Remove head bolt where oil comes up. Put pressure gun on fitting and grease opens line. Then blow grease out. *Bernard Rasmussen, 1650 Juniper Drive, Green Bay, Wisc.*

How To Prevent Parking Brake Failure

Parking brakes on some Chrysler products and other makes have been known to fail prematurely. A chafing action

(Continued on page 84)

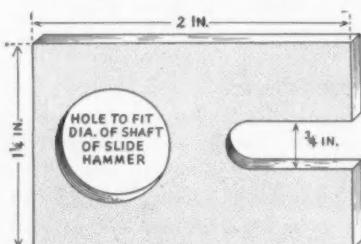
occurs sometimes where the cable passes through rather close quarters between frame cross member and the transmission. Neither original cable nor replacement has insulation at this wearing point to protect chafing. When outer wrapping of conduit wears through, a spongy weak parking brake results. A solution to this problem is to wrap the points where chafing will occur with one overlapping layer of friction tape followed by one overlapping layer of plaster tape. The end result is a four-ply wrap of insulating material which will at least triple cable life. *Russell J. Hahn, 106 Peoria Ave., Dixon, Ill.*

Handy Tool For Replacing Oil Seal

I have made a handy and cheap tool for replacing the oil seal or bushing in Ford rear transmission extension housing. The tool is made by welding a rear axle shaft bearing retainer on an old front universal joint. The tool can also be used to hold the grease in, while removing and replacing the transmission. *Francis E. Brady, Farris Motor Co., Jefferson City, Tennessee.*

Easy Method For Removing Broken Rocker Arm Studs

We have found a quick and easy method for removing brok-

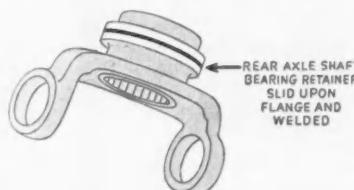


en rocker arm studs from Chevrolet and Pontiac heads without removing the head. We first elec-

tric weld a nut on the broken stud. While doing this we put a wet rag around the stud so that the sparks will not ignite the oil. Next, take a flat piece of iron 2 inches long and about $1/4$ inch thick and notch it out so that it will fit over the broken stud. We then drill a hole in the piece of metal to fit the shaft of a slide hammer. Then just slide the piece of metal under the nut on the broken stud. With about two taps of the slide hammer, the broken stud is out. To re-install, we pack the new stud in dry-ice. This contracts it and makes the installation very simple. *Norman Henjum, Wing-Pontiac, Breck- enridge, Minnesota.*

Tool To Assemble Tail Shaft Assembly Into Case

When overhauling the General Motors Jet-A-Way transmis-

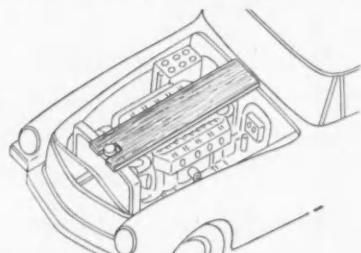


sions used in the late Cadillac, Oldsmobile and Pontiac, it is necessary to have a special tool to assemble the tail shaft assem-

bly into the case. Here is a tool I made in about five minutes from a discarded Chevrolet drive-shaft bushing. To make the tool, remove the thin brass bushing from the center of the large sleeve and discard. This will be the exact size to fit the shaft for assembly into the case. Next, drill and tap sleeve in approximately the center for a $5/16 \times 1/2$ inch bolt or set screw. The tool is now completed. *Ray E. McLane, Bill's Super Service, 6001 So. Main St., Los Angeles, Calif.*

Board Makes Servicing Remote Parts Easier

We have been using a scaffold



board when we have to service remote and hard-to-reach parts on the engine. The board makes it easier to check the distributor, points, fuel pump, carburetor, plugs, voltage regulator and wires. A mechanic can sit or lie on the board in a comfortable position to service these parts. *Goldies Auto Repair, 168 E. 98th St., Brooklyn 12, New York.*

If you have an original idea for a special tool, a short cut on any job or any trick of value to others, write it down and if necessary make a rough sketch. Just make it clear. Send it to Motor Age. If your Kink is used it may bring you \$7.50 or \$25. All entries become the property of the Chilton Company. Because of the quantity of entries sent in, none can be returned.

Buick for '59 Continued from page 45

electrode has been adopted to place the focus of ignition well within the combustion chamber.

The larger 401-cu. in. engine has been treated to some special features. The cylinder block is designed to handle the increased loading. Cylinder deck height from the crankshaft center line is increased by 0.240 in. To protect against oil leaks, the crankshaft thrust bearing has been moved from the rear to the center main bearing. Main bearing caps have a deep section to resist the increased loading. The crankshaft provides for the longer stroke; has carefully formed fillet radii to improve fatigue life.

A longer connecting rod—6.220 in.—provides the same piston-to-counterweight clearance as in the 364-cu. in. engine. New pistons and rings, and longer pistons are employed. Piston skirt stiffness has been increased; ribs revised.

The oilpan has been changed on both engines to reduce capacity to four quarts. New cylinder heads incorporate 1.500-in. diameter exhaust valves on both engines. Both intake and exhaust valves are redesigned to provide additional room for the valve springs. In addition, valve springs are redesigned because of the increase in valve lift.

A new distributor body and clamp permit the interchangeable use of these parts on both engines.

Softer front engine and Triple transmission mounts are employed, utilizing the Buick nodal-point theory of mounting. Front mounts have been simplified for ease of assembly and improved accuracy of powerplant alignment.

Series 4400 synchromesh cars have a new pedal linkage which transfers motion by means of levers through a frame-and-engine-mounted equalizer to the

clutch yoke. The clutch driven plate has a revised damper assembly having 10 springs.

The dual exhaust system is simplified, uses four less hangers and two less joints. Mufflers and tailpipes are either of aluminum or zinc-plated materials with mufflers of double-wrapped construction, mufflers and tailpipes for the single system be-

ing made of the same materials. Ball joints are continued but have a reversed ball at the manifolds to maintain tightness under higher temperatures. Tailpipes are relocated. They are now placed above the cross member to improve accessibility for service.

The Triple Turbine transmission, available as optional equipment in all series, has undergone some detail improvements.

(Continued on page 94)



Men whose time is worth upwards of \$3.50 an hour won't stand for inferior replacement parts that may save fractions of pennies. Their time—and reputation is worth much more. They buy bolts, nuts, cap screws from Lamson & Sessions' complete line of original equipment fasteners . . . from the world's largest, most dependable maker of automotive fasteners.

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1958 Tune-up—Alignment Specifications

MAKE AND MODEL	ENGINE		TUNE-UP DATA										FRONT END ALIGNMENT		
	No. of Cylinders Bore and Stroke (in.)	Maximum Brake H.P.	Spark Plug Mate and Size (mm)	VALVES				IGNITION				Caster (Deg.)	Camber (Deg.)	Toe-In (in.)	
				Seat Angle	Operating Tappet Clearance	Inlet (Deg.)	Exhaust (Deg.)	Inlet (in.)	Exhaust (in.)	Breaker Point Gap (in.)	Cam Angle (Deg.)	Spark Plug Gap (in.)	Timing	Steering Axis Inclination (Deg.)	
AMERICAN MOTORS CORP.															
Rambler	6-5801	90	ACA-14	45	45	.016C	.018C	.016	32	.035	38	8	1 1/4N to 1 1/4P	0 to 1 1/2P	1/8 to 1/8
	6-5810	127	CA-14	45	45	.012H	.018H	.016	32	.035	58	6'11'	1/2N to 1 1/2P	1/8 to 1/8	1/8 to 1/8
	8-5820	215	CA-14	30	45	.012H	.014H	.016	30	.035	58	6'11'	1/2N to 1 1/2P	1/8 to 1/8	1/8 to 1/8
	8-5880	270	CA-14	30	45	Hyd	Hyd	.016	30	.035	58	6'11'	1/2N to 1 1/2P	1/8 to 1/8	1/8 to 1/8
CHRYSLER CORP.															
Chrysler	8-LC1-L	290	AL-14	45	45	Hyd	Hyd	.017	30	.035	88	6 1/2	0 to 1 1/2N	0 to 1 1/2P	1/8 to 1/8
	8-LC2-L	310	AL-14	45	45	Hyd	Hyd	.017	30	.035	88	6 1/2	1/2N to 1 1/2P	0 to 1 1/2P	1/8 to 1/8
	8-LC3-H	345	AL-14	45	45	Hyd	Hyd	.017	38	.035	88	6 1/2	1/2N to 1 1/2P	0 to 1 1/2P	1/8 to 1/8
	8-LC3-S	380	AL-14	45	45	.016H	.024H	.017	38	.035	88	6 1/2	1/2N to 1 1/2P	0 to 1 1/2P	1/8 to 1/8
De Soto	8-LS1-L	280	AL-14	45	45	Hyd	Hyd	.017	30	.035	88	6 1/2	0 to 1 1/2N	0 to 1 1/2P	1/8 to 1/8
	8-LS2-M	295	AL-14	45	45	Hyd	Hyd	.017	30	.035	88	6 1/2	0 to 1 1/2N	0 to 1 1/2P	1/8 to 1/8
	8-LS3-H	305	AL-14	45	45	Hyd	Hyd	.017	30	.035	88	6 1/2	0 to 1 1/2N	0 to 1 1/2P	1/8 to 1/8
	8-LS3-S	345	AL-14	45	45	Hyd	Hyd	.017	38	.035	88	6 1/2	0 to 1 1/2N	0 to 1 1/2P	1/8 to 1/8
Dodge	8-LD1-L1, LD1-L2	138	AL-14	45	45	.010H	.010H	.020	35	.035	28	6 1/2	0 to 1 1/2N	0 to 1 1/2P	1/8 to 1/8
	8-LD2-L1, LD2-L2	252	AL-14	45	45	Hyd	Hyd	.017	30	.035	28	6 1/2	0 to 1 1/2N	0 to 1 1/2P	1/8 to 1/8
	8-LD2-M	265	AL-14	45	45	Hyd	Hyd	.017	30	.035	28	6 1/2	0 to 1 1/2N	0 to 1 1/2P	1/8 to 1/8
	8-LD3-L, LD3-H	295	AL-14	45	45	Hyd	Hyd	.017	30	.035	28	6 1/2	0 to 1 1/2N	0 to 1 1/2P	1/8 to 1/8
	8-LD2 & LD3, D-500 Package	305	AL-14	45	45	Hyd	Hyd	.017	30	.035	28	6 1/2	0 to 1 1/2N	0 to 1 1/2P	1/8 to 1/8
Imperial	8-LY1-L, LY1-M, LY1-H	345	AL-14	45	45	Hyd	Hyd	.017	38	.035	68	6 1/2	0 to 1 1/2N	0 to 1 1/2P	1/8 to 1/8
Plymouth	8-LP1-L, LP1-M, LP1-H	132	AL-14	45	45	.010H	.010H	.020	29	.035	28	6 1/2	0 to 1 1/2N	0 to 1 1/2P	1/8 to 1/8
	8-LP2-L, LP2-M, LP2-H	225	AL-14	45	45	.012H	.012H	.017	30	.035	108	6 1/2	0 to 1 1/2N	0 to 1 1/2P	1/8 to 1/8
	8-LP2-H Fury	290	AL-14	45	45	.012H	.018H	.017	38	.035	108	6 1/2	0 to 1 1/2N	0 to 1 1/2P	1/8 to 1/8
	Golden Commando Package	305	AL-14	45	45	Hyd	Hyd	.017	38	.035	68	6 1/2	0 to 1 1/2N	0 to 1 1/2P	1/8 to 1/8
FORD MOTOR CO.															
Edsel	8-57A, B, 58A, B; 63A, B; 64A, 76B	303	Ch-18	30	45	Hyd	Hyd	.015	27	.034	78	7	0 to 1P	1 1/2P to 1P	1/8 to 1/8
	8-57A, 57B, 63A, 63B, 76B	345	Ch-18	30	45	Hyd	Hyd	.015	27	.034	78	7	0 to 1 1/2P	0 to 1/2P	1/8 to 1/8
Ford	8-All	145	Ch-18	45 1/2	45 1/2	.019H	.019H	.025	37	.034	48	7 7/8	1/2P to 1 1/2P	1/2P to 1 1/2P	1/8 to 1/8
	8-Custom 300, Fairlane	205	Ch-18	45 1/2	45 1/2	.019H	.019H	.015	27	.034	38	7 7/8	1/2P to 1 1/2P	1/2P to 1 1/2P	1/8 to 1/8
	8-Fairlane 500	265	Ch-18	60 1/2	45 1/2	.028H	.028H	.015	27	.034	38	7 7/8	1/2P to 1 1/2P	1/2P to 1 1/2P	1/8 to 1/8
	8-Fairlane 500 Option	300	Ch-18	60 1/2	45 1/2	.028H	.028H	.015	27	.034	38	7 7/8	1/2P to 1 1/2P	1/2P to 1 1/2P	1/8 to 1/8
	8-Thunderbird	300	Ch-18	60 1/2	45 1/2	.028H	.028H	.015	27	.034	38	7 7/8	1/2P to 1 1/2P	1/2P to 1 1/2P	1/8 to 1/8
Lincoln	8-All	375	Ch-18	29 1/2	44 1/2	Hyd	Hyd	.015	27	.032	68	7 28 10 ⁸	0 to 1 1/2N	0 to 1/2P	1/8 to 1/8
Mercury	8-Monterey	312	Ch-18	60 1/2	45 1/2	Hyd	Hyd	.015	27	.034	48	7	1/2N to 2N	1/2N to 1 1/2N	1/8 to 1/8
	8-Montclair	330	Ch-18	60 1/2	45 1/2	Hyd	Hyd	.015	27	.034	48	7	1/2N to 2N	1/2N to 1 1/2N	1/8 to 1/8
	8-Park Lane	360	Ch-18	60 1/2	45 1/2	Hyd	Hyd	.015	27	.034	78	7	1/2N to 2N	1/2N to 1 1/2N	1/8 to 1/8
GENERAL MOTORS CORP.															
Buick	8-40	250	AC-14	45	45	Hyd	Hyd	.015	30	.033	58	7	3/4N	1/2P	1/8 to 1/8
	8-50, 60, 70, 700	300	AC-14	45	45	Hyd	Hyd	.015	30	.033	58	7	3/4N	1/2P	1/8 to 1/8
Cadillac	8-60, 62, 75	3103	AC-14	44	44	Hyd	Hyd	.016	30	.035	58	4	3/4N to 1 1/2N	3/4N to 1/2P	1/8 to 1/8
Chevrolet	8-1100, 1500, 1700	145	AC-14	31	46	Hyd	Hyd	.019	30	.035	TC	7 5/8	1/2N to 1 1/2P	0 to 1P	1/8 to 1/8
	8-1200, 1600, 1800	185	AC-14	45	45	Hyd	Hyd	.019	30	.035	48	7 5/8	1/2N to 1 1/2P	0 to 1P	1/8 to 1/8
	8-1200, 1600, 1800	250	AC-14	45	45	Hyd	Hyd	.019	30	.035	48	7 5/8	1/2N to 1 1/2P	0 to 1P	1/8 to 1/8
	8-867	230	AC-14	45	45	Hyd	Hyd	.018	29	.035	48	4	2 1/2P	0 to 1P	0 to 1/8
Oldsmobile	8-88	265	AC-14	45	45	Hyd	Hyd	.018	30	.030	58	7	0 to 1N	1/4N to 1 1/2P	0 to 1/8
	8-S88, 98	305	AC-14	45	45	Hyd	Hyd	.018	30	.030	58	7	0 to 1N	1/4N to 1 1/2P	0 to 1/8
Pontiac	8-58-25, 58-27, 58-28	240	AC-14	30	45	Hyd	Hyd	.016	30	.036	68	4 5/8	0 to 1N	0 to 1P	0 to 1/8
	8-58-25, 58-27, 58-28	255	AC-14	30	45	Hyd	Hyd	.016	30	.036	68	4 5/8	0 to 1N	0 to 1P	0 to 1/8
STUDEBAKER-PACKARD CORP.															
Packard	8-58L	225	Ch-14	45	45	.024H	.024H	.016	31	.036	48	6	1N to 2 1/2N	0 to 1P	1/8 to 1/8
	8-58L-K	275	Ch-14	45	45	.024H	.024H	.016	31	.036	48	6	1N to 2 1/2N	0 to 1P	1/8 to 1/8
Studebaker	8-58G	101	Ch-14	45	45	.016C	.020	.031	28	6	1N to 2 1/2N	0 to 1P	1/8 to 1/8		
	8-58B	180	Ch-14	45	45	.024H	.024H	.016	31	.036	48	6	1N to 2 1/2N	1N to 1P	1/8 to 1/8
	8-58H	225	Ch-14	45	45	.024H	.024H	.016	31	.035	48	6	1N to 2 1/2N	0 to 1P	1/8 to 1/8
	8-58H-K7	275	Ch-14	45	45	.024H	.024H	.016	31	.036	48	6	1N to 2 1/2N	0 to 1P	1/8 to 1/8

ABBREVIATIONS

—Left only; right, $1/4N$ to $1/4P$
—Eldorado models, 335.

AC—A. C. Spark Plug Div.
ACA—Auto-Lite, Champion or A.C.
AL—Electric Auto-Lite Co.
B—Before top center.

C—Cold.
CA—Champion or Auto-Lite.
Ch—Champion Spark Plug Co.
H—Hot.

Hyd—Hydraulic valve lifters.
N—Negative.
P—Positive.
TC—Top center.

1958 New Passenger Car Registrations by Makes by States*

STATE AND MONTH	Buick	Cad- illac	Chev- rolet	Chrys- ler	De Soto	Dodge	Edsel	Ford	Im- perial	Lin- coln	Mer- cury	Olds- mobile	Pack- ard	Ply- mouth	Pon- tiac	Ram- bler	Stude- baker	Mic- Dom.	For- eign	Total	
Alabama.....	290	105	1658	52	43	104	25	1077	7	17	133	337	1	349	249	159	21	4	329	4,962	
6 Mos.	2075	620	8740	332	238	708	275	6632	74	25	480	4	19	65	106	1	213	118	75	16	28,813
Arizona.....	86	58	729	37	18	53	25	480	4	19	65	106	1	213	118	75	16	256	2,379		
6 Mos.	645	361	3744	145	90	311	158	2320	60	121	385	734	7	938	614	483	79	1604	12,799		
Arkansas.....	83	37	419	15	11	23	13	354	2	7	48	103	122	57	49	11	93	16	1,447		
6 Mos.	1045	385	5055	147	136	499	126	4554	28	75	553	1241	9	1365	885	391	166	1	604	17,165	
California.....	1144	1263	10379	413	305	1093	287	7494	150	207	964	1574	20	3194	1278	1513	239	6063	37,580		
6 Mos.	8738	7736	57738	2794	2064	7030	1937	43578	1092	1852	5886	10618	138	18754	9009	6478	1294	13	31965	218,715	
Colorado.....	163	75	1246	45	25	116	34	784	9	15	147	206	2	299	177	243	40	438	4,064		
6 Mos.	1218	536	7276	325	235	853	278	5074	80	165	934	1492	11	2041	1192	1155	201	15	2030	25,111	
Connecticut.....	196	162	1637	96	62	147	46	1235	17	28	162	365	4	590	269	397	69	970	6,512		
6 Mos.	1496	989	8182	585	400	999	328	6429	112	249	862	2028	31	3358	1690	1564	324	4	4271	33,90	
Delaware.....	37	36	326	16	9	23	5	216	1	4	26	63	127	49	26	2	76	1	1,04		
6 Mos.	390	230	2552	129	104	202	75	1563	18	44	232	533	5	923	419	176	47	517	8,159		
Dist. of Columbia.....	73	64	490	44	14	53	4	379	2	8	33	97	3	160	103	56	4	3	179	1,769	
6 Mos.	396	409	2838	219	136	364	32	1979	76	69	300	651	10	1160	576	227	54	21	1053	10,570	
Florida.....	549	501	2379	129	88	282	65	245	45	100	337	689	3	810	431	464	66	2	1861	11,873	
6 Mos.	4367	3325	21419	786	690	1644	629	16361	399	811	2185	4861	36	5890	3084	2297	465	15	11033	80,297	
Georgia.....	318	155	2160	59	74	163	29	1600	21	22	165	414	5	536	328	186	43	4	884	6,966	
6 Mos.	2719	1050	13994	477	311	1043	318	11789	96	212	1153	3135	30	3479	2587	964	347	18	3885	47,587	
Idaho.....	78	45	417	22	12	59	27	317	2	9	77	107	2	144	89	128	25	161	1,721		
6 Mos.	535	255	2088	123	86	279	115	1613	37	73	359	605	9	756	599	559	138	1	752	8,582	
Illinois.....	1633	872	8691	334	260	582	170	5381	79	147	793	2056	20	2006	1417	1214	237	22	522	26,762	
6 Mos.	11606	5614	50233	2378	1790	3800	1300	32755	600	1302	4935	13785	138	12983	9205	6398	1526	238	4755	165,447	
Indiana.....	807	269	3298	143	113	272	147	2563	28	44	326	917	10	1022	533	533	247	8	443	11,723	
6 Mos.	5090	1934	17872	834	804	1785	867	14804	236	400	1970	5702	100	5453	3548	2189	1407	27	2166	67,100	
Iowa.....	350	101	2298	75	38	150	61	1747	15	19	218	381	1	490	321	328	73	1	155	6,826	
6 Mos.	2384	711	21121	480	318	1059	400	9986	80	149	1268	2740	12	2863	2280	1446	303	34	943	39,518	
Kansas.....	330	115	1872	76	45	175	68	1552	10	20	184	264	6	897	201	202	57	2	292	5,238	
6 Mos.	2351	713	10429	448	373	8763	85	169	1074	2353	29	2680	2099	1278	320	14	1261	35,854			
Kentucky.....	298	98	1547	42	35	118	46	1647	13	16	178	339	3	383	239	126	23	4	4719		
6 Mos.	1766	543	7856	267	195	607	292	561	59	118	891	1972	23	2046	1339	556	145	43	755	25,122	
Louisiana.....	225	114	1914	43	24	102	27	1244	10	22	166	363	1	305	244	114	33	1	399	5,367	
6 Mos.	2011	791	11890	321	228	811	271	9394	89	155	1045	2613	9	2351	2036	458	193	19	1838	36,869	
Maine.....	108	49	630	18	24	65	15	538	4	9	71	123	3	17	110	120	26	2	222	2,432	
6 Mos.	705	208	3421	189	131	422	92	3011	26	48	427	635	12	1106	661	576	191	1	1174	13,049	
Maryland.....	345	148	2458	84	68	231	49	1408	9	23	190	331	2	695	327	266	42	2	552	7,231	
6 Mos.	273	857	13200	646	507	1438	337	8809	140	157	1133	2368	21	4546	2190	1035	286	12	2667	42,82	
Massachusetts.....	496	281	2886	134	115	311	54	2409	36	37	289	753	3	1090	452	737	67	3	913	11,046	
6 Mos.	3485	1702	14426	873	799	1776	391	12765	196	403	1600	4503	38	5869	2656	3410	381	77	4918	60,268	
Michigan.....	1264	591	6781	199	190	556	328	5385	45	132	1000	1743	4	1754	1172	953	145	10	1262	23,524	
6 Mos.	7007	3788	35545	1352	1371	3498	1935	27743	334	935	5105	10282	54	10094	6853	4332	777	37	5303	127,150	
Minnesota.....	401	157	2729	93	76	196	88	202	17	30	257	578	7	789	487	490	109	257	8,773		
6 Mos.	3275	1039	14563	660	548	1491	537	11:00	148	262	1593	3989	36	4312	3073	2301	623	144	1412	51,206	
Mississippi.....	184	47	948	28	14	44	13	733	7	3	48	196	1	172	154	70	31	113	2,806		
6 Mos.	1236	331	5428	168	136	353	136	4353	42	51	346	1204	5	1079	949	287	148	5	574	16,829	
Missouri.....	605	267	4016	95	140	311	74	2855	37	50	292	650	5	1021	552	379	86	477	11,742		
6 Mos.	3732	1515	19960	624	704	1768	484	15034	180	290	1618	4244	37	5388	3266	1549	597	5	2329	63,324	
Montana.....	106	32	465	30	12	40	17	397	5	8	47	103	1	156	88	134	27	145	1,508		
6 Mos.	643	242	2481	141	90	315	114	2097	37	61	338	629	6	718	504	528	159	7	561	9,671	
Nebraska.....	146	54	1167	36	17	81	11	964	10	16	113	265	1	276	165	121	32	7	149	3,549	
6 Mos.	1251	457	6771	258	133	561	152	5497	65	116	715	1438	18	1159	664	193	51	756	21,886		
Nevada.....	11	12	135	6	12	17	10	74	3	16	29	1	1	57	14	15	7	112	531		
6 Mos.	149	96	960	72	68	126	96	799	20	57	174	256	7	306	242	66	60	760	4,387		
New Hampshire.....	316	163	2080	89	58	231	58	1537	15	41	224	344	1	646	378	455	100	1	961	7,698	
6 Mos.	904	602	5049	321	212	534	121	301	73	85	459	1178	8	1779	900	730	150	2	1346	17,544	
New Jersey.....	5433	3631	24775	2119	1600	3324	902	16597	529	713	2591	6804	87	10238	5005	5025	822	15	6886	95,324	
New Mexico.....	74	19	417	21	20	48	30	324	5	9	63	78	1	132	73	57	10	118	1,498		
6 Mos.	631	207	2932	145	113	301	138	1934	42	68	339	682	5	272	564	299	101	2	653	9,883	
New York.....	2125	1492	11278	611	521	1227	231	7684	165	242	1206	3552	25	3863	2039	1838	482	61	3785	42,427	
6 Mos.	13574	8414	54420	4535	3313	7545	1699	3520	1098	1776	6331	1969	179	21576	11537	7544	2421	353	17661	222,883	
North Carolina.....	352	147	1741	70	63	162	47	1136	15	16	143	395	3	484	301	191	50	1	283	6,089	
6 Mos.	2553	931	9504	440	397	938	304	9653	82	156	853	2678	27	2702	206	860	317	6	1382	35,809	
North Dakota.....	43	21	416	23	14	39	11	395	6	11	57	82	1	127	60	92	21	1	38	1,458	
6 Mos.	514	142	2646	182	103	313	124	2234	34	65	338	693	6	906	422	418	114	1	237	9,492	
Ohio.....	1383	747	708	295	255	799	213	5196	60	125	872	1578	10	2071	1311	851	199	7	1054	23,828	
6 Mos.	9282	3731	37699	1952	1900	5147	1389	31112	447	592	5123	10450	104	1289	7991	3991	1152	88	8586	141,033	
Oklahoma.....	242	113	1766	45	38	108	35	1142	8	15	141	324	3	358	244	139	36	1	218	4,976	
6 Mos.	6761	673	6																		

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POWER BRAKE REPAIR KITS

the only complete line on the market

ALL FROM ONE SOURCE—Now you can obtain all of your power brake repair kits from one dependable source of supply and backed by the Wagner Lockheed reputation for quality and performance.

GROWING MARKET—This year more than one out of four passenger cars manufactured is equipped with power brakes and the total is growing. Improve your brake service immediately with this complete line of repair kits. Only Wagner can supply you with kits for all makes and models of passenger cars.

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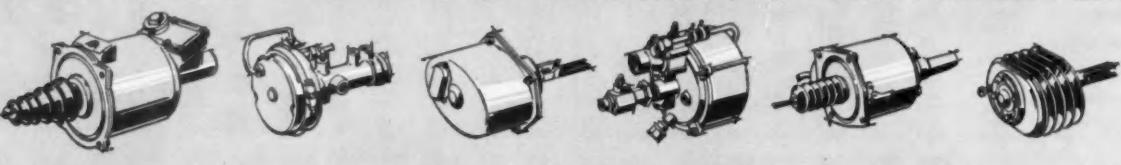
- New complete line covers all passenger cars and is available only from Wagner.
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**EACH KIT CONTAINS A
DETAILED HOW-TO-DO-IT
INSTRUCTION SHEET!**

Each power brake repair kit includes an easy-to-follow how-to-do-it instruction sheet with all parts named and identified. In addition, it shows the steps to be taken in disassembly and assembly of all sub-units and components.

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ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES

Tubeless Tires Continued from page 58

yardstick for replacing tire valves because conditions which affect tire rubber are closely related to those which affect tire valve rubber. Road hazards, oil, tar, extreme temperatures and long exposure are factors which modify both tire and valve life, simultaneously.

Research engineers, after extensive laboratory and field tests have reported the following:

"After extended service, valve failure occurs when the rubber loses its elastic properties due to

the prolonged action of compressive stresses; that is, by the comparatively large rubber diameter of the valve being confined in a smaller rim hole. This compression ultimately results in a permanent reduction in diameter, or set of the valve where it is squeezed in the rim hole. When this phase of deterioration is reached, the rubber can no longer follow the expansion, contraction, and flexing action of the tire and leakage between the valve and rim can result.

Leakage is slow and intermittent at first, but soon progresses to a stage when the loss of air pressure becomes dangerously fast. This leakage can be easily detected by periodically checking with a tire gauge."

Dangerous Condition

Unfortunately, through failure to install new valves when needed, an untold number of deteriorated valves are precariously holding air in many new tires across the country. This condition is actually endangering the life of the new tire and the safety of the driver and his

...the IDEAL TOOLS



ELECTRIC SIZE 2U 3/8" DRIVE

The mighty mite that's also multi-purpose! In addition to running and removing nuts, the Ingersoll-Rand 2U does 10 other jobs—smoothly, rapidly and at low cost. Have this powerful 5-pounder demonstrated in your own shop. Ask your I-R Jobber today.

Here is helpful, practical information that shows how you can increase earnings and productivity. Twenty-four pages cover 9 operations on 16 makes of cars, completely illustrated. Send for your copy today or ask your I-R Jobber for your "Bonus Dollars" manual.

18-740

ONLY INGERSOLL-RAND GIVES YOU
5 SIZES IN ELECTRIC IMPACTOOLS
8 SIZES IN AIR TOOLS

passengers—all of which completely outweighs the negligible cost of the new valve.

Install New Valve

Some servicemen avoid the valve changeover, not because they wouldn't welcome the profit derived from each valve they sell, but because they do not care to be bothered with the mechanics of valve changeover. Always be sure to install a new valve during tire changeover to protect the tire and to insure good customer relations.

Removing and installing of valves may follow this proce-

dure: When visual inspection or the water test shows a valve leak—or when tire replacement requires a valve replacement—de-mounting of the old valve is a fast and simple operation. A tool is available that quickly installs new snap-in tubeless valves or removes old valves.

To Install Snap-In Valves

1. Lubricate the valve above the rubber base with soap solution. Insert valve in clean rim hole.

2. Align tool handle (when used), valve socket, and valve. Screw the threaded swivel sock-

et onto the cap threads of valve. Finger-tight.

3. Select the notch that provides the best alignment of the valve and rim hole. Use the edge of the rim as a lever point.

4. Push down gently until the rubber base of the valve is in full contact with the inner side of the rim. An air-tight seal of the valve to the rim is thus completed.

Removing Valve

To remove the valve, tilt the valve and lubricate around the exposed rim hole. Attach and po-

(Continued on page 95)

for TRANSMISSION BENCH and BODY WORK...

AIR
SIZE 402
3/8" DRIVE

Light, compact, powerful! The I-R 402 is the smallest pistol grip power wrench you can buy . . . And don't forget this: more mechanics use I-R Impactools than any other make. You can prove this dependable performance with an on-the-job demonstration. Ask your I-R Jobber today.

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SPEEDCLENE—a super-fast, premium parts cleaner which combines positive cleaning action with a pleasant odor.

METALCLENE—a cold-immersion cleaner which removes dirt, grease, and gum from metal parts.

ECONOCLENE—a multipurpose cleaner concentrate which can be diluted and mixed in varying proportions for economical cleaning. *REG. U.S. PAT. OFF.

BENDIX PRODUCTS
DIVISION **SOUTH BEND, IND.**



Above is pictured the officers of the first chartered Independent Garage Owners of America unit in Kentucky. Front row (left) is Wilbur Jones, president, and Robert Hogue, secretary-treasurer. Standing, left to right, are board members Herbert Glass, Aria Tohey, and George Lewis. Unit has already sponsored a carburetor clinic, distributed technical manuals to all members, and set up a customer budget plan system.



Officers of charter group of IGO of Connecticut: left to right: Selon Weiner, secretary; Mel Chamberlain, treasurer; Al Previtali, president; and Sam Amente, vice president. This chapter has set out 39 large metal signs promoting IGO in the cities of Hartford and East Hartford.

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Bonds**

**Align Fenders,
Hoods, Rear
Decks the
Easy Way**

3/4 to 1 1/2
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**One Man Job with AMERICAN
POWER PULL & Fender Straps**

Ask your jobber
or write
for catalog

THE AMERICAN GAGE & MFG. CO.

123 Bayard Street, Dayton 1, Ohio

Hillman Minx Continued from page 71

wheel cylinder on the front wheels. Pull against the tension of the pull-back springs. Insert the adjusters and covers.

Removing Pistons from Engine

Remove oil pan and cylinder head. Remove the self-locking nuts securing the big end of the bearing caps.

Connecting rods have no identifying numbers on either the rod or connecting rod cap. Therefore they should be marked so that they can be installed in the original cylinders. Also, the big end of the caps should be re-assembled to the same rods from which they were removed. To show correct assembly a forging flash is left on the oil squirt hole side of the connecting rod. This flash lines up with a similar flash on the connecting rod cap. Each complete connecting rod should be refitted to the same piston and cylinder bore from which it was removed. When the rods are fitted the oil squirt holes drilled through the small projections immediately above the big ends must face towards the right hand side of the cylinder walls with the engine viewed from the rear. The pistons must be fitted to the appropriate connecting rods so that the split sides of the piston skirts are all on the left hand side of the engine as viewed from the rear.

Adjusting Gearshift Lever

The only external adjustment is the operating piston rod attached to the clutch withdrawal lever. Adjustment between the pedal and master cylinder is preset and is not provided for in service. Adjustment, when necessary, should be effected by slackening the locknut at the back of the fork on the withdrawal lever outer end and turning the piston rod. Free movement at the outer end of the

withdrawal lever should be about 3/32nd of an inch.

Transmission Removal

Place the car on a lift over a pit. Drain the radiator, disconnect the radiator top hose and negative lead from battery. Remove rocker cover. In some cases it may be necessary to remove

the rocker shaft assembly completely if equipped with heater. Disconnect accelerator control linkage. Remove both rear mounting brackets. Disconnect exhaust pipe from manifold. Disconnect exhaust hanger bracket and propeller shaft safety strap and remove strap. Remove the propeller shaft rear coupling bolts, disconnect coupling and remove shaft rearwards of spine.

(Continued on page 94)

**Model 3000
"SAFE TURN"
BRAKE DRUM
LATHE**
With heavy gauge
steel Cabinet with
plenty of storage
space.
Low-cost Grinder
unit and Heavy
Duty Accessories
also available.

**No. 2000
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**Get YOUR
AMMCO BRAKE SHOP
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\$138* PER DAY**

**Only 2 brake jobs a month
will pay for it and
still make you a profit**

**Get the complete profit story from your AMMCO Distributor and
have him arrange for a free demonstration in your own shop.**

AMMCO TOOLS, INC., 2162 Commonwealth Ave., North Chicago, Ill.

Hillman Minx Continued from page 93

Place a jack under the rear of the engine. Remove bolts securing engine rear mounting bracket to frame. Disconnect speedometer cable. Disconnect rod from external change speed lever on counter shaft below steering column. Remove center floor cover plate and disconnect selector cable turning through

floor. Remove selector cable complete to avoid kinking. Remove bolt and nuts securing engine tiebar at bellhousing. Remove nuts and washers securing tiebar front fixing and remove tiebar. Disconnect hydraulic clutch line. Disconnect cable and remove starter motor. Lower rear of engine. Remove nuts and bolts

securing bell housing. Remove gear box at bell housing unit rearwards and downwards.

Adjusting the Clutch

It is important to note that if the gear shift lever is incorrectly set it may be brought into contact with the steering column cowl when reverse gear is engaged causing the cowl to crack. Adjustment is effected by placing the gearshift lever in a neutral position and disconnect the ball joint from the end of the gear change actuating lever at the bottom of the control shaft.

Rotate Ball Joint

The ball joint should then be rotated to lengthen the control rod until, when it is reconnected, the end of the gearshift lever assumes a position one inch above the horizontal. After adjustments, check the clearance that exists between the steering column cowl and gear shift lever when the latter is in the reverse position.

PROTECT your ring jobs

MAKE SURE the motor oil you put in will help preserve the effectiveness of your repair jobs . . . that it will keep rings gum-free and wear-free for full compression and power, and the entire combustion chamber clean for top fuel efficiency.

always lubricate with PENNZOIL

Customer satisfaction — for keeps!

Pennzoil motor oils are refined from 100% Pennsylvania crude and blended with Z-7, the exclusive ingredient that stays active. These oils stay *tough* in spite of engine heat and pressure, provide control over acids and other deposits, keep *all* moving parts free of excessive wear — for keeps. They're a sure way to customer satisfaction — to more profitable service business!

2 GREAT MOTOR OILS!

Now . . . Pennzoil 10W-30 with Z-7, world's only *oil-rich* multiple viscosity oil; and famous Pennzoil with Z-7, available in all correct service grades.

Cash in on Pennzoil acceptance! Call your nearest Pennzoil distributor now, or write Pennzoil, Box 78, Oil City, Pa.

Member Penn. Grade Crude Oil Assn., Permit No. 2.



Buick for '59

Continued from page 85

Among these are: added balance requirements, reduced balance and runout limits on rotating parts, and a new second turbine blade form.

All clutching elements of the transmissions are of friction plate type, including neutral, drive, reverse, and grade. The latter is the downhill retarder clutch. It may be engaged at any speed up to 45 mph to attain control on grades. Since no band type control elements are employed, no service adjustments are necessary.

Softer acting body mounts, employing thicker, softer and highly damped synthetic rubber and a lower spring rate are used on all closed body cars.

Tubeless Tires Continued from page 91

sition the tool in the same way as described for installing the valve. Push the tool handle downward until the valve base is pulled through the rim hole.

Rim and Bead Leaks

Air is kept in the tire by a tight fit between the tire's bead surface and rim contours. The rim flange must be smooth and free from dents. Pitted rims, due to rust and scale, may cause the bead to seat improperly. Similarly, any grooves or high spots on the butt-weld joint in the rim may cause loss of air.

If the bead permits a leak, this condition can often be stopped. Every tubeless tire and tubeless rim is designed to perfectly seat and seal at this vital point. Damage of any kind must be detected and treated exactly as prescribed. The methods and treatment for rim and bead leaks are clearly outlined in your tire manufacturer's repair manual.

Demounting Tire

So far we have only dealt with leaks caused by conditions other than direct injury to the tire. When a leak is detected through the tire rubber itself, the area should be clearly circled with a crayon and the tire demounted for the appropriate repair.

The construction features of the new 14 and 15 rims require certain variations in standard mounting and demounting methods. A standard procedure has now been established. It eliminates any delay or danger that might arise as a result of malpractice.

Tire Changer

Tire changing machines are strongly recommended. Not only because they are time saving, but because they are designed especially for tubeless work—

handling mounting and demounting with the greatest care. For shop owners with a good volume of tire service work, a tire changer is a must.

After locking the tire and wheel assembly on the changer or placing it on the floor, and after deflating the tire, a special "bead-breaker" is used. Nev-

er try tools used on the conventional tires, such as hammers, and rough edged instruments. Never force the beads. This might damage the rim-seal ridges on the beads; cause air to escape after the tire is remounted.

Be sure that the narrow bead ledge of the rim is in the "up" position. A sufficient quantity of thin vegetable oil soap solution or approved rubber lubricant is

(Continued on page 97)

\$3,969

**IN ONE
MONTH**

REPAIRING RADIATORS!

"My INLAND Radiator Department brought in an additional \$3,969 in a single month!" says Bob Neyland, Neyland's Paint & Body Works, Baton Rouge, La.

\$10,000 to \$20,000 a year additional volume is common! "\$16,750 in one year"—McRill's Auto Repair and Radiator Service, Twin Falls, Idaho. "\$18,000 in one year!"—Clough Auto Parts, Storm Lake, Iowa. Radiator servicing brings more profit per sq. ft. than any other activity in the service area!

20 to 30 Million Radiators Need Servicing Yearly! Tests prove 83% of all radiators over a year old are partly plugged. Inland equipment demonstrates need for radiator-cleaning—is designed for fast easy production methods—stays neat and clean.

Inland, world's largest radiator equipment manufacturer, offers the complete package—Equipment, Training, Merchandising, "Pays-For-Itself" Purchase Plan.

Mail Today!

Now free 48-page book "Blueprint for Profits" shows equipment, training course, "Pays-for-itself" purchase plan and experiences of other operators. Take a minute and mail the coupon now.

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Are you now operating a radiator dept. Yes No



Herbrand's
2 NEWEST
time-savers



**QUICK-CHECK
GENERATOR METER
HT-700**

DEALER'S NET: \$4.95

The HT-700. A Quick-Check generator meter without leads or connections! Now you can make a quick check of the opening and closing amperage of the regulator cut-out and the regulated amperage from the generator. Just place the induction bar over the insulated wire from the generator and take a reading. It's easy to use—it's quick—and it's a sure way to increase flat rate profits!

**BRAKE
SPRING
TOOL No. 261**

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**CLOSE-UP
VIEW
OF
SOCKET
END**

The 261. Beat the clock on brake relining and repair jobs with this new brake spring tool. Herbrand's latest Tool of the Month makes fast work of removing and replacing brake shoe return springs on all Bendix type brakes. Use socket end to remove the spring—use grooved end to slide it easily back in place. Cuts job time in half!

**SEE YOUR JOBBER—AND STAY AHEAD—
WITH HERBRAND TOOLS AND EQUIPMENT**

HERBRAND DIVISION
THE BINGHAM-HERBRAND CORPORATION
FREMONT, OHIO

Circle 383 On Inquiry Card, page 65
 96

How the Volume Grows . *Continued from page 47*

Auditors have their own way of sizing up a department. And Mr. Nance excuses them on these grounds. However, when a parts manager has to spend one fourth of his time checking bins to hold his inventory at a minimum in fear of the auditor's axe, it's not practicable.

So much time was spent holding inventory at a low minimum, special order business was costing the dealership some \$10,000 a year in time, and actual expense in special ordering. This along with lost sales.

Joe Murray, parts manager, when he hasn't the time to contact independent shop owners, wholesale parts volume drops off from \$1,500 to \$2,000 a month . . . or a net profit ranging from \$375 to \$450.

This "time factor" is as important to the service manager. A careful check showed that the service manager, under the conventional arrangement, had more details and responsibility than he could manage.

For example, the body shop foreman was out of body lead. As there was no time to shop, the service manager was paying 10 cents a pound more than he could have bought it from another source. This "little saving" amounts to \$125.00 a year.

This same condition was true of sanding discs. With a little time, Durbin found where he could save the dealership \$15 to \$20 a month on this item.

Under the old arrangement, Birchfield had to squeeze out time to make his A.F.A. reports. Pressed for time, often they were incomplete, and they came back. Small claims had to be ignored and the loss absorbed by the dealership.

Durbin reports that it takes him an average of two hours a day to make these reports to conform to factory standard.

With the time, Durbin checks repair orders to see that all parts are charged against the job. It's estimated that this supervision saves the dealership between \$600 and \$700 a month.

In a dealership, new car customers expect immediate attention. One comes in for an adjustment. Under the old set up, the service manager had to spend so much time away from his post. Consequently, there was no one around who could say "yes" or "no". The customer could either wait, or come back later . . . at some unspecified time in the hopes of catching the service manager in. A certain percentage of new car customers looked upon this as a "run-around." They went off disappointed.

As Director of Parts and Service, Weldon Birchfield can get both department managers together and brief them on new factory directives, eliminating half the time consumed under the old routine.

Looking at the parts department from a practical viewpoint, the parts department will carry a parts inventory 50 percent higher than previously. Even with no increase in shop volume, this added investment will be back in the dealer's pocket within a year's time . . . That \$10,000 spent on special orders will be visible in the bins. And there will be no "turn-away" business at the counter. Either at retail or wholesale level.

To give you an idea of the size of this dealership, there are 16 shopmen who put out some 1900 tickets a month; the body shop, with 10 men, grosses, roughly, \$7,500 a month.

In effect, this dealership has reduced overhead by creating a new executive position and upped both his net and his gross.

Tubeless Tires Continued from page 95

then applied on the tire beads to smooth the operation. Demounting should be done with extreme care. Never force the bead into the drop center well at one spot, but rather "inch" it off a little at a time, working around the tire. This prevents bead damage. Start bead removal at the valve so that the bead doesn't catch at the valve base. After both beads are broken loose, the tire is removed carefully, so as to protect the rim-seal ridges and bead toes.

Treating Punctures

About 90 per cent of all tubeless tire punctures do not exceed $\frac{1}{4}$ " in diameter. What this means is that 90 per cent of all tubeless puncture repairs can be made without extreme heat vulcanization. Either self-vulcanizing (chemical) patches, or compression rivets will do the job effectively. The advantages of the newly-developed rivet are that no cleaning or buffing is required before making the repair. Thus valuable time is saved.

Here's how to remount the tire after the appropriate repair has been made. The tire bead should be cleaned with a moistened cloth with clear water. Rim-seal surfaces should be wiped to remove foreign material. Clean the rim flanges and bead seats with emery cloth or steel wool if dirt or rust has collected.

Snapping Beads in Place

Lubricate the tire beads, rim flanges and bead ledge with thin vegetable oil soap solution or an approved rubber lubricant. This will help to snap the beads into place when the tire is inflated.

Remember that the mounted wheel assembly on the tire changer or on the floor should have the narrow ledge of the rim facing up.

Mount the tire with tire irons,

taking small "bites." Never use any type of hammer. Be sure that the tire irons are free of burrs.

Align the balance mark on the tire with the tire valve. Start the tire over the rim flange so that the valve stem is near that portion of the bead which goes over the rim flange last.

Do not stand over the tire while inflating. An extension gauge with a clip-on chuck is strongly advised so that you may stand well back from the tire for maximum safety.

Do not exceed 40 pounds air pressure when inflating the tire. If 40 lbs. does not seat the beads properly, deflate. Re-lubricate the center tire on rim; then reinflate. After the beads have been seated properly, reduce the

(Continued on page 98)



★ MOST COMPLETE COVERAGE ★ HIGHEST TAPPET QUALITY ★ SINGLE-PRODUCT SERVICE

Johnson, as the industry's only exclusive tappet manufacturer, has devoted all of its engineering and service efforts toward giving you the best line of hydraulic and mechanical tappets on the market. Johnson pioneered tappets for the replacement field, developed the popular adjustable tappet for Ford L-Head engines, offers the most complete tappet line available, and still holds your stock inventory lower. Get the Johnson Tappet habit . . . today.



"The most complete tappet line"

JOHNSON JP PRODUCTS

INC.

MUSKEGON, MICHIGAN

Tubeless Tires Continued from page 97

pressure to the recommended operating pressure.

Place the entire wheel assembly back into the water tank to make sure that there are no leak in the areas of the repair, beads, valve and rim itself. Then, to insure airtight performance, always apply a new positive-sealing valve cap.

Proper inflation care is good preventive medicine. You can easily render this additional service to your customers, which in turn will be a service to you because good will encourages steady customers.

The automotive, petroleum and tire industries agree that you are in an excellent position

to do something about hot (steady highway driving), warm (steady city driving), and cool tires, by adjusting pressures accordingly. An example of allowing for the right amount of pressure for certain speeds is sustained high speed driving (turnpike). For this type of performance you should add 4 to 6 pounds pressure to the manufacturers' normal recommended inflation.

Under and over-inflated tires affect tread contact with the road and can seriously reduce the life of the tire. Under-inflation definitely affects riding comfort, steering ease, safety and performance. Check tire pressures frequently. Be sure to check your own gauges by having one certified accurate gauge always kept for master gauge use only.

"K-D TOOLS MAKE MY JOB EASIER . . . "



LOW PRICED CYLINDER HEAD HOLDER

K-D 175 holds all sizes of cylinder heads in any position for cleaning and servicing valves. Light weight, compact, perfectly balanced. For GM, Ford, Chrysler-built and others.

428 Hose Clamp Pliers removes, installs all sizes $\frac{1}{2}$ " up. Double slotted swivel jaws.

Screw type K-D 700 Lifter for L-head engines incl. later model Ford 6. Easy turning handle, plenty of lift.

K-D 430 Door Handle Spring Remover for GM, Ford-built, Nash, Studebaker. Tough, thin, spring steel jaws. Makes job easy.

383 Compressor. Fast, easy to use on late model valve-in-heads. For GM, Ford, Chrysler-built.

438 Window Regulator Arm Remover. For Ford-built since '52 without taking roller assemblies apart.

K-D MANUFACTURING CO., LANCASTER, PA.

K-D TOOLS

"Make Hard Jobs Easy" has been the purpose and slogan of K-D Tools for over thirty years--- and they will do just that for you on old and new models alike. - At Jobbers' everywhere.

Finance Company Protects Buyers

Insurance that will cover payments owed on financed automobiles in the event the buyer is disabled from illness or accident has been added to the credit life insurance policy as part of the finance plan offered time buyers by Universal C.I.T. Credit Corporation.

The plan does not involve additional cost to the purchaser for the additional coverage.

The new disability feature, worked out by Universal C.I.T. with the Connecticut General Life Insurance Company, is an extension of the present credit life insurance benefit to include disability coverage. It provides funds for meeting automobile payments during a period when the time buyer is totally disabled, from illness or an accident, if the disability continues for at least four months. This added protection is available in 38 states. It will be introduced in other states as soon as the state insurance authorities approve the new policy.

MGA Sportscar Continued from page 74

The twin camshafts, driven by a Duplex roller chain, operate the valves at an angle of 80-deg. The three-bearing, counter-balanced crankshaft has been stiffened and fitted with new connecting rods and pistons. The sump is made of cast aluminum and finned to aid cooling, which is maintained by a water pump and thermostatically controlled fan.

The new MGA's hydraulic transmission offers four speeds and reverse, with synchromesh

change occurring on second, third and fourth gears. The sports car's fuel system provides two semi-downdraught carburetors, each with its own air cleaner. The disk brakes (by Dunlop) are found on all four wheels, whose base, incidentally, measures 7-ft. 10-in.

Turning to styling, the "Twin Cam" has the identical box-sec-

tion frame of current MGA's. The low, recognizable chassis, designed for torsional rigidity, continues over the rear axle. Bucket seats are, of course, adjustable. Mechanics will find the fuel cap to be the "quick-release" variety. And the one-piece hood is hinged at the rear, not the front.

Initial production of the "Twin Cam," according to the M.G. Car Company Limited, will be in "consecutive quantities."



Rechrome Bumpers . . .

Continued from page 69

taining a solution of copper and potassium cyanide. The bumper comes out with a satin-finish, copper coating. Coating is then buffed to a high gloss. After a 1/2-hour dip in the nickel plating tank, containing nickel sulphate and brightening agents, the bumper has a high-gloss nickel coating. This is followed up by the final chromium dip. For about five minutes in a chromic acid-sulphate solution. The bumper emerges with an iodine-like coating. When rinsed off, it leaves a bright gleaming chromium finish.

EIS ASSORTMENTS
create "One-Stop"
brake service, build
traffic, increase profits!

*** AK609-2 "POPULAR-PRICE" ASSORTMENT**
Contains 7 Master Cylinder Kits and 20 Wheel Cylinder Kits. A minimum stock for maximum coverage. Can be expanded to hold 20 Master Cylinder Kits and 40 Wheel Cylinder Kits. Quick-Reference Chart on top makes an attractive, colorful selling sign.

*** AC-1**
Approximate capacity — 25 Master Cylinder Kits, 112 Wheel Cylinder Kits, 32 Hoses and 30 Switches. Larger repair kit and cylinder assortments are also available.

*** AC-2**
Approximate capacity, 25 Master Cylinders and 80 Wheel Cylinders.

NOTE:—AK Cabinet is designed to ride "piggy-back" on AC Cabinet. They fit together to provide extensive coverage.

*** A222 "E" Series CUP ASSORTMENT**
Contains 84 sets of "E" Series Cups, Expanders and Springs — $\frac{3}{4}$ "- $1\frac{1}{2}$ ".

Write for Catalog No. 26H-18 — EIS AUTOMOTIVE CORP., Middletown, Conn.

Carburetion and Tune-Up Continued from page 60

However, it turned out that the fan belt on the car was part of a test by a prominent fan belt manufacturer to stress this phase of merchandising. Lehr received five dollars from the "customer" for his alertness and merchandising sense!

Shenk got into automotive service work on a fulltime basis

shortly after World War II. Following a hitch in the Navy, he joined a general repair shop as mechanic.

Six years later he decided to strike out on his own. He opened a repair shop on Willow St. in Millersville. He had a dynamometer there and found that more and more customers were at-

tracted by his type of tune-up work.

He went to factory schools to advance his knowledge of carburetion, ignition, and engine testing techniques. He bought another dynamometer and more tune-up test equipment and made the big move.

It has well succeeded. He's been two years in his present location. Business is good and volume is high and steady. He allows on the average one full hour for each tune-up job. Because demand is steady, he arranges these tune-ups on an appointment basis. His appointment book reminds one of a prospering dentist—full up from one to two weeks ahead, all the time!

PASSENGER CARS

GENUINE P&D PARTS

P&DIZE
MORE ELECTRICAL
SYSTEMS WITH
THESE SALES
HELPS...

6 NEW CATALOGS OF P & D PARTS

Plus—A Technical Book on "Causes & Cures of Ignition Troubles"—Price \$1 a copy

And—The New P & D-ize slogan backed by a 12 month warranty on all parts!

Mobile Display signs • New Tune-up Chart • New Decals • A revised Field Program of cooperation between jobbers, dealers and P & D representatives.

All of which spells one thing only for you—**MORE SALES!**

Can you afford to ignore P & D-izing? Write us now.

P & D MANUFACTURING CO., INC. Established 1920
19-02 Steinway St., Long Island City 5, N. Y.
Export Sales: Borg Warner International, 36 So. Wabash Ave., Chicago 3, Ill.

For Longer and Better Engine Life...

P&DIZE
YOUR ELECTRICAL SYSTEM

TOP NOTCH
Tune-Up 30W

QUALITY CONTROLLED
COILS

Studebaker Names Sports Car Head

Paul O'Shea, top sports car driver for three years and winner of the Sports Illustrated driving award, has joined Studebaker-Packard Corporation as sports car director. Announcement was made by S. A. Skillman, vice-president and general sales manager.

O'Shea, who once manufactured his own sports cars and trained harness horses, won his first major race at Vero Beach, Florida, in 1952. He went on to win many sports car competitions in 1955, 1956 and 1957 in a Mercedes-Benz 300-SL.

Skillman said that O'Shea would hold a series of sports car clinics at various sports car tracks throughout the country.

O'Shea in 1954 was top salesman for a Mercedes-Benz dealer after forsaking horses for automobiles. The next year he joined Daimler-Benz, A. G., of Stuttgart, Germany, manufacturers of the Mercedes-Benz cars. He is the author of the successful book "Guide to Competition Driving."

Firebird III

Continued from page 67

At a touch of a button, Autoguide takes over steering control by electronically following low frequency power from a cable in the highway. In addition, a constant road speed can be maintained. This by pushbuttoning a third electronic control—Cruisecontrol. This produces automatic guidance and speed control for the car.

The architecture of the car is in three functional units. First is the nose section. This houses a myriad of accessories. Also the small piston engine which powers the accessories.

Secondly, is the passenger compartment. This is wrapped tightly in the middle portion of the body. It is entered by gull wing doors on power operated hinges. Special contour seats equipped with power operated headrests and footrests allow the car to be low and yet comfortable.

Third, the power compartment. This is located behind the passenger compartment. Here is housed the new gas turbine engine. Also the transmission, fuel tanks, and special electronic "nerve center." Emphasizing the powerplant and also acting as high speed aerodynamic stabilizers is the cluster of seven fins. Height at the top of the dorsal fin is 57.3 inches.

Firebird III has a 119 inch wheel base and 57 inch front and rear treads. Overall length is 248.4 inches. Ground clearance is 6.35 inches.

To drive Firebird III, the Unicontrol stick is pushed forward to accelerate. Deflecting it to left or right steers in these directions, and pulling back on the handle applies the brakes. A button on the control handle actuates a downhill retarder unit mounted on the differential.

The Unicontrol handle, when rotated 20 degrees either left or right of center, puts the car in reverse. An 80 degree turn right

or left puts the transmission in park. When the handle is in normal position, the car is in drive.

Selection buttons for "Autoguide" and "Cruisecontrol" are located on the instrument panel, which is just ahead of the Unicontrol stick. The driver may push either button, retaining manual steering or acceleration

only in his Unicontrol stick or push both buttons and put car under full automatic control.

The main engine is a new 225 horsepower Whirlfire GT-305 regenerative gas turbine. Engine weight with accessories is less than 600 pounds. It receives air from ducts located on either side of the car behind the passenger compartment and exhausts through twin ports which extend

(Continued on page 102)

CHOOSE FROM THIS COMPLETE LINE OF WEAVER JACKS

 <p>Lo-Hi-Draulic Jacks in 1 1/4, 1 1/2, 2, 4, 10 and 20-ton capacities.</p>	 <p>Hydraulic Bumper Lift Jack offers easy foot operation.</p>
 <p>Hydraulic Hand Jacks in models of 1 1/2, 3, 5, 8, 12, and 20-tons capacity.</p>	 <p>Mechanical Bumper Jacks WA-26 for passenger cars. WA-27 for service station use.</p>
 <p>Shop Service Stand in 5, 10, and 14-tons capacity per pair.</p>	 <p>Wheel Dolly for handling large duals.</p>

Ask your Weaver Jobber for details

WEAVER SERVICE SHOP EQUIPMENT

Complete Weaver line includes: Twin Post Lifts . . . Triple Post Lifts . . . Single Post Roll-on, Free-Wheel and Frame Type Lifts . . . Unit Lifts . . . Bumper Lift . . . Car Washers . . . Wheel Alignment Equipment . . . Headlight Testers . . . Brake Testers . . . Wheel Balancing Equipment . . . Jacks . . . Wheel Dollies . . . and Air Compressors.

Firebird III Continued from page 101

above it through the back deck.

Engine, transmission grade retarder and differential are designed into a single rear-end unit. A modified Hydra-Matic transmission is mounted directly between the differential case and the engine.

The two-cylinder, 53 pound high compression engine in the vehicle nose supplies electrical

and hydraulic power for all the car's accessories. Designed and built by GM Engineering Staff, it operates at a constant speed which allows the use of lighter, smaller accessory units with higher efficiency.

In addition to furnishing the car's accessory power, the small engine also drives a 110 volt generator which provides 60 cycle

electrical power which would be of great civil defense value in event of damage to home power systems. It is possible to plug into the car for power to run household appliances or even while camping in remote areas. Either engine can operate independently.

The suspension system employs interconnected front and rear air-oil springs to suppress uncomfortable pitching motions when the car travels over wavy roads.

The unusual Firebird III brake system features wheel and brake drums combined in a single aluminum alloy casting. The motion of each wheel acts like a turbine to draw air through 36 passages cast in a circle around its center, providing brake cooling. The turbine cooling effect and aluminum construction are responsible for the Turb-Al name.

The finish of Firebird III is the same Magic Mirror acrylic laquer which is standard equipment on all 1959 GM cars.

Other features of Firebird III include:

1. Special drag brakes at the rear of the car which open like the jaws of an alligator to help slow the car at high speeds.

2. A lighting system that turns on automatically through photo-electric cells when daylight turns to darkness, and a new wide fluorescent tube headlamp that throws a light in front of the car.

3. An ultra-sonic key which opens the doors by high frequency sound waves from as much as 15 feet away from the car.

Joins Law Firm

Thomas F. Roche, formerly with the LaSalle National Bank of Chicago, has joined the Chicago law firm of Halfpenny and Hahn.

Roche will engage principally in estate planning, trust and probate matters.

**CUSHIONED
FENDER PROTECTOR**

\$7.00 value for \$2.49
when purchased with our Water Pump Plan

- All-Vinyl Plastic
- Covers entire fender
- Sponge rubber underlining clings to fender
- Won't slip, won't crawl, won't stain
- Resistant to oil, grease and alcohol
- Wipes clean
- Protects fender from dropped tools, from button and belt buckle scratches

Plus FREE 4-color wall banner...two colorful streamers promoting water pump replacement...water pump chart with application and prices.

PROFIT NOW... PAY LATER

**on McQUAY-
NORRIS
WATER PUMPS**

Just order any five water pumps covered in our deferred payment plan. You get immediate delivery, you pay later on terms arranged directly with your wholesaler. Don't pass up this great opportunity!

**All-New
Pre-Tested**



SEE YOUR McQUAY-NORRIS WHOLESALER FOR FULL DETAILS
McQUAY-NORRIS MANUFACTURING CO. • ST. LOUIS • TORONTO

New Products Continued from page 66

340. Muffler Catalog

Merit Mufflers: An 80-page muffler and pipe catalog is being distributed. Product pages describe anti-rust design, heavier construction and cushion-aire shell. A special section is devoted to the company's expanded line of coated steel mufflers. Installation tips on muffler replacement are provided. Other features include a description of the company's merchandiser program offered to dealers. Replacement listings cover passenger cars, light and heavy duty trucks, and tractors. Other listings include fiberglass-packed mufflers, dual exhaust systems, brackets and clamps, including the company's Shur-Seal assortment.

341. Volt Meter

Fox Valley Instrument Company: Offers a volt-meter designed to quickly check voltage of 6 and 12 volt cars. Aimed at garages and service stations, the unit tests generators, batteries and voltage regulators; also cables and car wiring. The tester (named Fox Valley Model 100 Volt-Meter) offers a 0 to 16 range, two 5-ft. insulated leads and large meter. A plastic case measures 8 x 5 x 2 1/2-in. Accuracy is guaranteed within 2 per cent of full scale reading. Two rubber feet permit resting atop fenders.

342. Valve Seat Line

Aluminum Industries, Inc.: A line of valve seat inserts used by vehicle manufacturers as original equipment has been announced. They're color-keyed for identification and individually packaged in sealed plastic bags. The I-1000 series, made of molybdenum alloy, is recommended for engines not originally equipped with inserts. These are coated with green dye on the

outside diameter. The I-3000 series, chrome cobalt alloy coated with blue dye, is for heavy duty engines factory equipped with this insert. The heavy duty I-7000 series, of chrome molybdenum and coated bright red, is designed for engines operating under severe conditions.

343. Carburetor Guide

Champion Parts Rebuilders: A 32-page Carburetor Identification Guide has been issued with more than 200 illustrations of most models used today. It illus-



trates 95 per cent of passenger car exchange units handled. A cross-reference table converts original carburetor numbers to the catalog number. Detailed illustrations readily identify carburetors without numbers.

344. Magnetic Plate

Leyda Auto Parts: Auto dealer plates can now be instantly attached or removed. A magnetic dealer plate has been developed that attaches on contact. Entitled "Magna-Tatch," it mounts on the back of a dealer's license plate. Two 2 1/8-in. (diameter) magnetic holding assemblies secure to the metal. The company reports a holding force of 50-lbs. Remagnetizing is not required, and bumps or high winds will not dislodge it. The plate has a rubber-like finish which protects a car's finish. Parts are cadmium-plated to combat corrosion.

345. Switch Assortment

Automotive Div., Wagner Electric Corp.: A new assortment of Lockheed stoplight switches has been announced. It contains 26 switches (hydraulic and mechanical) for popular cars and trucks, including new models. Extra switches are included of the popular numbers. A red, white and blue merchandising carton encourages sales. Application data is also included.

346. Seat Covers

The Firestone Tire & Rubber Company: Offers seat cover material that resembles leather but stretches for a perfect fit. Named "Fry Stretch Leather," it's made with elastic-like vinyl backing. The company claims this allows it to cover irregular surfaces, also corners. Installation cost is reduced by the use of electric cables, which insure wrinkle-free covering. A set requires thirty minutes to install. The company reports three sizes will fit most late model cars.

347. Power Windows

AMT Corp.: A self-contained power window lift to convert hand operated windows has been announced. It's applicable to both new and used cars. Front windows are controlled by a dual switch on the driver's side. A single switch allows passengers to control the right front window. Installation reportedly requires less than an hour, and no special tools are needed. Nor is it necessary to cut body metal. The lift is available for 6 or 12-volt systems.

348. Hydraulic Lift

Cochin Mfg. Company: Aimed at shops and service stations, a hydraulic lift with adjustable, rotating arms is available. It's designed for both standard and foreign cars. The adjustable arms rotate to contact points on the frame. Capacity is listed at 8,000-lbs.

(Continued on page 104)

New Products Continued from page 103

349. Radiator Hose

The Dayton Rubber Company: The development of a flexible radiator hose has been announced. Major improvement, company claims, is its molded construction. Each section of hose is molded under heat and pressure. This reportedly assures greater uniformity than wrap-type construction. The hose also has fabric reinforcement from end to end. The company claims it will accommodate up to eight times the pressure requirements of OEM cooling systems.

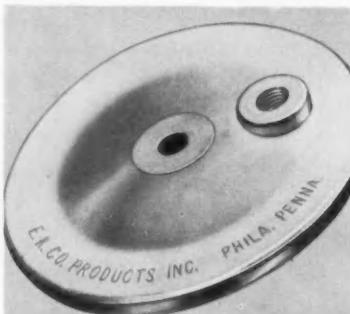
350. Accessory Plug

A. G. Busch and Company: An automobile accessory plug is available for the lighter socket. Entitled "Safco", it permits products (electric shavers, etc.) to use the socket as a power source. Two types of terminals

are provided: a locking model and one for reverse polarity hook-up. Plugs without terminals are available for companies using A.M.P. insulation, piercing-type terminals. Plugs are offered in 6 and 12 volt, or universal models.

351. Adapter Plug

E. K. Company Products, Inc.: A bleeder adapter plug has been



developed to fit the larger master cylinder of 1958 Chrysler built

cars. It can also be used with any brake bleeding and dispensing equipment. Name: Ekco Adapter.

Mullery to Head Chicago Group

Don C. Mullery was re-elected president of the Chicago Automobile Trade Association for the coming year. He is president of Broadway-Ford.

Maxwell S. Evans, Bel-Park Motors, Oldsmobile dealer, was re-elected as vice-president. Newly elected secretary is Joseph Bartell, Bartell Motor Company (Pontiac). He succeeds Walter A. Gerwig, Gerwig-Nelson Motors, Inc. (Buick) who was elected as treasurer, succeeding Jerry H. Cizek (Chrysler-Plymouth). Cizek retires as a director after having served as association treasurer for the last two years.

The oldest manufacturer of air-operated end lifts now gives you
an end lift
for only \$272.00



See your jobber or write

AUTOMOTIVE EQUIPMENT MFG. CO.
11000 S. ALAMEDA ST. LYNWOOD, CALIF.



Manufacturers of LEE End Lift, LEE Body Man, LEE Truck Lift, LEE Bumper Lift, AEMCO Tubeless Truck Tire Changer, AEMCO Bead Breaker.

BULLETIN

MR. MECHANIC:

The owners of the following cars are having trouble with vapor lock, gasoline fumes and poor general performance during hot weather driving:

FORD—MERCURY—LINCOLN—CHREVOLET—OLDSMOBILE—CHRYSLER

Here is the trouble maker:



The trouble fools many mechanics because it only occurs when the engine is a little overheated, such as—in heavy traffic (Stop & Go), pulling a long hill, starting after brief stops (you know how the engine heat will raise when you first stop and the car is hard to start again immediately). Bear in mind, all these cars have nearly the exact same heat tube in the exhaust manifold to feed hot air to the automatic choke. The air passing through this original heat tube gets super hot and heats up the choke housing and adjacent carburetor body with extreme temperature, causing gasoline to boil, creating vapor lock and producing gasoline fumes. The BPS Choke Stove being mounted on the outside of manifold does not deliver this terrific hot air making for the above conditions, but it will supply just the right amount of air at correct temperature. The Choke Stove is guaranteed to perform to satisfaction or your money refunded.

SEE YOUR JOBBER

BRAKE PARTS SPECIALTY

1914 West Washington Blvd.

Los Angeles 18, Calif.

Calendar of Coming Events

Dealers Convention

Sept. 14-16 — Michigan Automobile Dealers Assn., Pantlind Hotel, Grand Rapids.
 Sept. 18-20 — Arkansas Automobile Dealers Assn., Hotel Marion, Little Rock.
 Sept. 21-22 — Kentucky Automobile Dealers Assn., Inc., Sheraton-Seelbach Hotel, Louisville.
 Sept. 21-23 — Ohio Automobile Dealers Assn., The Neil House, Columbus.
 Sept. 21-23 — New York State Automobile Dealers, Lake Placid Club, Lake Placid.
 Sept. 21-23 — Automotive Trade Assn. of Virginia, Cavalier Hotel, Virginia Beach.
 Sept. 21-23 — New York State Automobile Dealers, Inc. 35th Annual Convention, Lake Placid Club, Essex County, N.Y.
 Sept. 22-23 — Wisconsin Automotive Trades Assn., Schroeder Hotel, Milwaukee.
 Oct. 19-21 — Florida Automobile Dealers Assn., Eden Roc Hotel, Miami Beach.
 Nov. 8-10 — Texas Independent Automobile Dealers Assn., Texas Hotel, Fort Worth.
 Nov. 16-18 — Mississippi Automobile Dealers Assn., Buena Vista Hotel, Biloxi.
 Dec. 3 — Utah Automobile Dealers Assn., Newhouse Hotel, Salt Lake City.
 Dec. 9 — Milwaukee County Automobile Dealers Assn., Milwaukee Athletic Club, Milwaukee.
 Jan. 31-Feb. 4 — National Automobile Dealers Assn., Chicago.

General

Sept. 15-20 — Automotive Electric Association's Fall Meeting of the Manufacturers and Distributors Div., Broadmoor Hotel, Colorado Springs, Col.
 Oct. 12-18 — Oil Progress Week.
 Oct. 15-16 — Virginia-Carolinas Automotive Wholesalers Assn., Fall meeting, Robert E. Lee Hotel, Winston-Salem, N.C.
 Oct. 15-18 — Automotive Wholesalers of Texas convention, Moody Civic Center, Galveston, Texas.
 Oct. 20-22 — 1958 SAE National Transportation Meeting, Lord Baltimore Hotel, Baltimore, Maryland.
 Oct. 20-24 — 46th annual National Safety Congress and Exposition, Chicago.
 Oct. 24-25 — California Automotive Wholesalers Assn. convention, Monterey, Cal.
 Oct. 24-Nov. 2 — Small Car and Aircraft Exhibition, International Amphitheatre, Chicago.
 Oct. 27-28-29 — New Jersey Automotive Trade Association, Chalfont-Haddon Hall—Atlantic City.
 Nov. 3-6 — Automotive Warehouse Distributors Assn. convention and manufacturers-distributors conference, Muehlebach Hotel, Kansas City, Mo.
 Nov. 10-13 — American Petroleum Institute 38th Meeting, Conrad Hilton, Palmer House and Congress hotels, Chicago.
 Nov. 12 — Connecticut Automotive Trade Assn., Hotel Statler, Hartford.
 Nov. 14-16 — Florida Automotive Wholesalers Assn. convention, Hollywood, Fla.

Jan. 17-25 — 1959 Chicago Automobile Show, International Amphitheatre.
 Feb. 2-4 — Automotive Accessories Manufacturers of America exposition, New York Coliseum, New York City.
 Feb. 15 — Automotive Booster Clubs International executive counsel meeting, Conrad Hilton Hotel, Chicago.
 Feb. 15-16 — Automotive Affiliated Representatives officers meeting, Pick-Congress Hotel, Chicago.
 Feb. 15-17 — Motor and Equipment Wholesalers Assn. National Convention, Conrad Hilton Hotel, Chicago, Ill.
 Feb. 16 — Automotive Booster Clubs International board of governors meeting, Conrad Hilton Hotel, Chicago.

Feb. 17 — Automotive Affiliated Representatives board of directors and membership meeting, Pick-Congress Hotel, Chicago.

Feb. 18 — Automotive Booster Clubs International banquet, Conrad Hilton Hotel, Chicago.

Feb. 18-21 — International Automotive Service Industries Show, Navy Pier, Chicago.

Feb. 26-27 — American Petroleum Institute, Div. of Marketing, Lubrication Committee meeting, Sheraton-Cadillac Hotel, Detroit.

Feb. 27-March 8 — 1959 World Wide Auto Show, Miami Beach Exhibition Hall, Miami Beach, Florida.

March 12-15 — Pacific Automotive Show, San Francisco Civic Auditorium, San Francisco.

New tool removes old shocks in minutes!



SLASHES LABOR TIME AND COSTS FOR SHOCK ABSORBER REPLACEMENTS

• Completely New — The only tool that will instantly remove stud-end shock absorber nuts frozen by rust and corrosion.

• Completely Dependable — Made by Gabriel of finest tool steels, for long life performance.

• Works With Standard Ratchet — A few turns of the wrench and Pop! . . . the nut splits. So easy you can do it by feel.



This new Gabriel tool gives you the jump on profitable "shock" replacement business.



↑ "Nut-Buster" speeds job in under-hood position. No damage to engine or knuckles.

Ample clearance for rear shock work, too. A few swings of the ratchet, and the nut's loose!



Here's how you get it:

Call your Gabriel jobber now. He will give you complete details on how you can get this amazing labor-saving tool which makes the shock absorber business doubly profitable for you.

Call your Gabriel jobber now or write us direct.

THE GABRIEL COMPANY • CLEVELAND 15, OHIO

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Tuna Sol Electric, Inc.	—
Agency—E. M. Freystadt Assoc.	

U

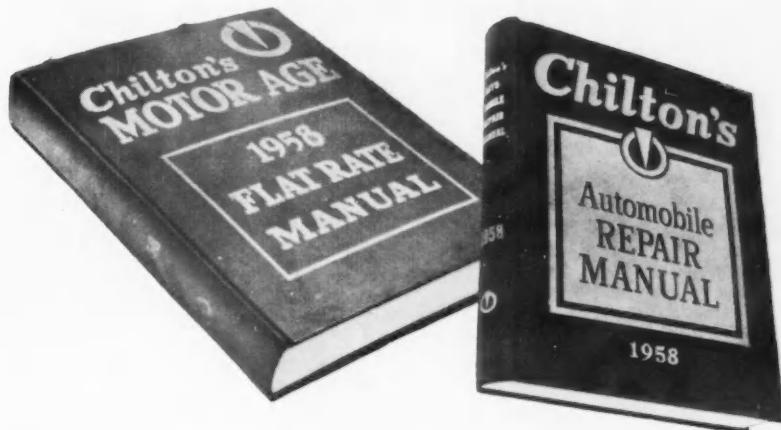
United Motors Systems, G.M.C.	15
Agency—Campbell-Ewald Co.	

V

Victor Mfg. & Gasket Co.	24
Agency—Buchen Co.	
Volkswagen of Amer. Inc.	—
Agency—J. M. Mathes, Inc.	

W

Wagner Electric Corp.	17 thru 20, 30, 88-89
Agency—Arthur R. Mogge	
Walker Mfg. Co. of Wis.	—
Agency—Keeling & Co.	
Wayne Pump Co.	—
Agency—A. E. Aldridge Assoc.	
Weaver Mfg. Co.	101
Agency—Arthur R. Mogge	
Wilkening Mfg. Co.	12-13
Agency—Aitkin-Kynett Co.	
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Repair man: "Shall I install a loud or soft horn, sir?"
Motorist: "Just one with a dirty sneer."

"Are you all packed?" he called from the top of the ladder.
"Shh," she warned, "you'll wake Daddy. He's asleep in the next room."
"No he's not. He's holding the ladder."

"If there is anyone in the congregation who likes sin let him stand up—what's this, Sister Martha, you like sin?"
"Oh pardon me, I thought you said gin."

"My wife dreamed last night that she was married to a millionaire."
"You are lucky. My wife thinks that in the daytime."

Papa: "Son, if you're going to get married, I have two little pieces of advice. First, insist on having one night a week with the boys."
Serious son: "What's the other?"
Papa: "Don't waste it on the boys."



He was buying a marriage license when the clerk asked, "Where is the bride elect?"

"Bride elect!" he exploded. "There was no election. She just appointed herself!"



"Waiter, you'll have to take this steak back. I've tried and tried, but still can't cut it."
"Sorry, sir. I can't take it back. You've bent it."

"My wife says if I don't give up golf, she'll leave me."
"I say that's hard luck."
"Yes, I'll miss her."

"You know, sir," said the old-timer to the company president, "I've been with the firm for 35 years and have made only one trifling mistake."
"That's fine, Jones," the executive commented, "but from now on please be more careful."

"What will you do when you grow up to be a big girl like me?"
"I'll reduce."



DO TUBE / TUBELESS TIRE REPAIR JOBS BETTER
AND FASTER WITH SCHRADER



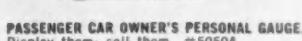
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Every tire repair job means deflating, inflating, and gauging. With the Schrader Chuck Gauge . . . a typical Schrader labor-saver . . . you can do all three with one device! Anyone can use it right, fast. Teamed up with Schrader's other gauges . . . famous for accuracy . . . and other Schrader re-

pair products, you and your service personnel get more done in less time, with less trouble.

And remember, no tire job is complete until you seal the air in with genuine Schrader Caps and Cores. Your Schrader supplier has them all.

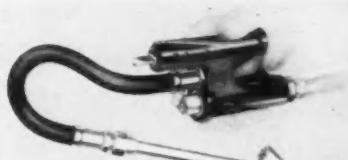
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